

AD-A142 150

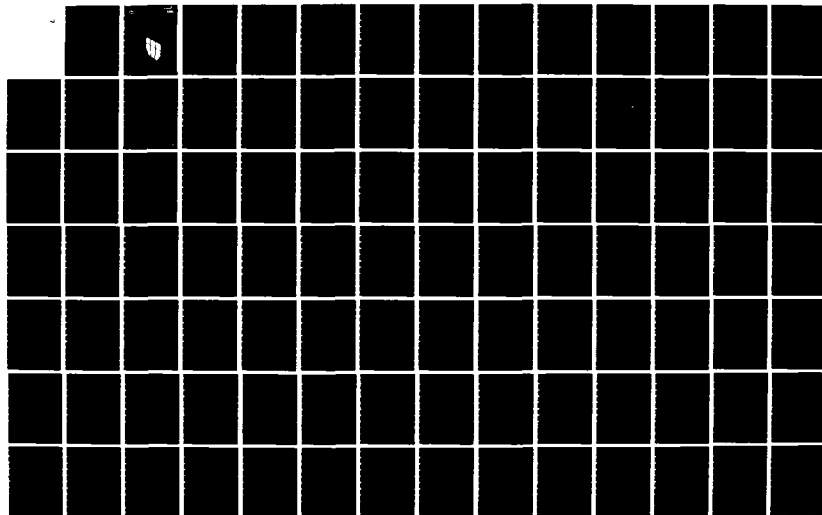
RPMA (REAL PROPERTY MAINTENANCE ACTIVITIES)
CONSOLIDATION ACTIVITIES IN T. (U) CONSTRUCTION
ENGINEERING RESEARCH LAB (ARMY) CHAMPAIGN IL
R BLACKMON MAY 84 CERL-TR-P-156-VOL-1

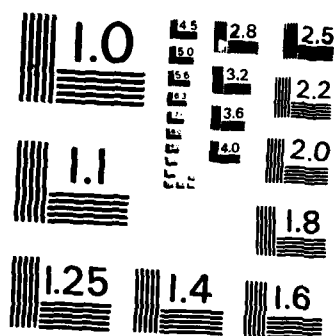
1/4

UNCLASSIFIED

F/G 5/1

NL





MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A



**US Army Corps
of Engineers**

Construction Engineering
Research Laboratory

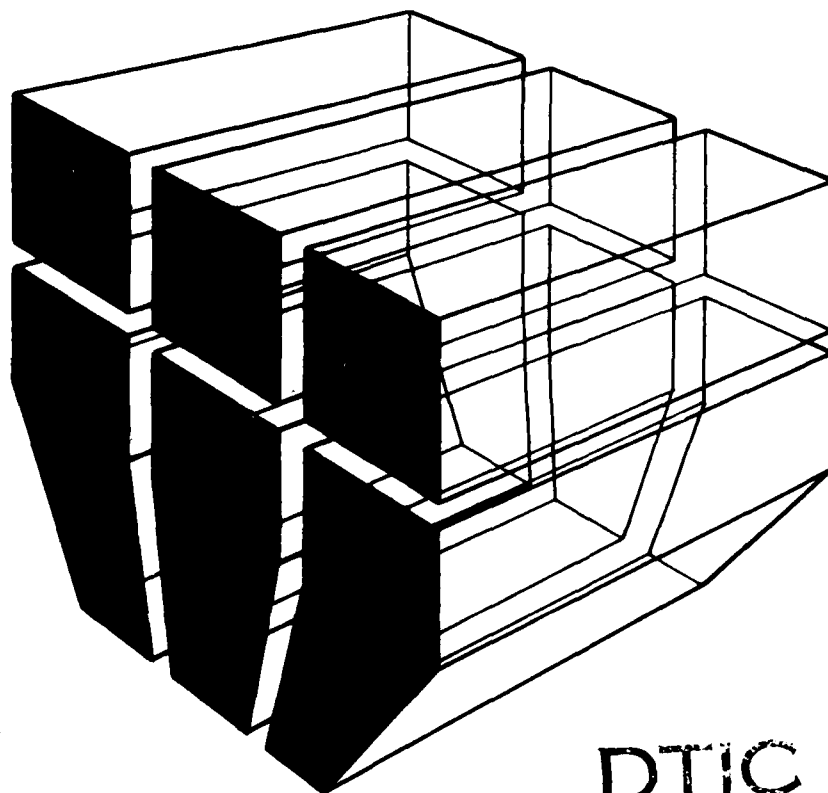
EERL

TECHNICAL REPORT P-156
May 1984

**RPMA CONSOLIDATION ACTIVITIES IN THE NATIONAL CAPITAL REGION
VOLUME I: MAIN REPORT**

AD-A142 150

by
Robert Blackmon



DTIC FILE COPY

Approved for public release; distribution unlimited.

DTIC
ELECTE
S JUN 15 1984 **D**

84 06 15 001

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER CERL-TR-P-156	2. GOVT ACCESSION NO. A142130	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) RPMA CONSOLIDATION ACTIVITIES IN THE NATIONAL CAPITAL REGION, VOLUME I: MAIN REPORT		5. TYPE OF REPORT & PERIOD COVERED Final
		6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s) Robert Blackmon		8. CONTRACT OR GRANT NUMBER(s) IAO F815
9. PERFORMING ORGANIZATION NAME AND ADDRESS U.S. ARMY CONSTRUCTION ENGINEERING RESEARCH LABORATORY P.O. BOX 4005, CHAMPAIGN, IL 61820		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
11. CONTROLLING OFFICE NAME AND ADDRESS U.S. ARMY ENGINEER DIVISION, HUNTSVILLE P.O. Box 1600 Huntsville, AL 35807		12. REPORT DATE May 1984
		13. NUMBER OF PAGES 320
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)		15. SECURITY CLASS. (of this report) Unclassified
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report) Approved for public release; distribution unlimited.		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES Copies are available from the National Technical Information Service Springfield, VA 22161		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) National Capital Region maintenance management military facilities		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) The Department of Defense has, as a continuing objective, stated that real property maintenance activities (RPMA) at military installations in a given geographic area should be consolidated when such action is cost effective and does not impair the mission. This report documents actions and decisions of the Implementation Planning Group (IPG) between January and September 1980 which led to the successful activation of the U.S. Army Engineer Activity, Capital Area to consolidate RPMA in the National Capital Region. The		

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)

BLOCK 20. (Cont'd).

region encompasses Fort Belvoir, Vint Hill Farms Station, Arlington Hall Station, Fort Myer, Fort McNair, Cameron Station, Walter Reed Army Medical Center, and the Defense Mapping Agency Hydrographic/Topographic Center. The report provides guidance to future Implementation Planning Groups (IPG) faced with a similar task and contains copies of documents that will be useful to future IPGs. The tasks described include organizational development, financial management, supply management, staff engineer and real property maintenance management, procurement management, consolidation evaluation, and consolidation planning.

Volume II provides supplementary material, Volume III gives organization development documentation, and Volume IV contains computer system, procurement workload data, and staff function documentation. These volumes are all unpublished. Copies of these volumes are available for reference at USAEA,CA.

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)

FOREWORD

This investigation was performed as a reimbursable project for the Huntsville Division of the U.S. Army Corps of Engineers under IAO F815 dated March 1981. The Program Manager was Mr. Leo Carden, HND-SP. Mr. Don Adams, U.S. Army Engineer Activity, Capital Area, Fort McNair, VA, was the Technical Monitor.

The investigation was performed by the Facility Systems Division (FS) of the U.S. Army Construction Engineering Research Laboratory (USA-CERL). Mr. E. A. Lotz is Chief of FS.

COL Paul J. Theuer is Commander and Director of USA-CERL, and Dr. L. R. Shaffer is Technical Director.

Accession For	
NTIS GRA&I	<input checked="" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By _____	
Distribution/	
Availability Codes	
Dist	Avail and/or Special
B/1	



CONTENTS

	<u>Page</u>
DD FORM 1473	1
FOREWORD	3
LIST OF TABLES AND FIGURES	7
1 INTRODUCTION.....	15
Purpose	20
Approach and Organization of Report	20
2 BACKGROUND OF INSTALLATIONS IN THE PROPOSED CONSOLIDATION AREA.....	21
Consolidation Area	21
Current Mode of Operations	22
3 IMPLEMENTATION PLANNING GROUP (IPG) ORGANIZATION.....	24
Approach	24
Formation of the Implementation Planning Group	24
Organization	26
Planning Schedule	26
Responsibilities	27
Outside Assistance	28
Coordination	28
Management	28
Support District Office	28
Activation	29
4 ORGANIZATION DEVELOPMENT.....	30
Task	30
Concept	30
Subtasks	30
Workload Definition	31
Structure	32
Functional Statement	37
TDA Development	43
Support Organizations	49
Personnel Activities	49
Coordination With SARPMA	54
Master Planning	54
Computer Support	55
5 FINANCIAL MANAGEMENT.....	57
Task	57
Concept	57
Approach	57
Financial Management Plan	58
Revolving Funds	60
ADP Systems	61
ADP Support	65
Overhead	66
Stock Fund	68
Support Agreement	68
Transfer of Payroll Function	70

CONTENTS (Cont'd)

	<u>Page</u>
Budget Preparation	70
Basic Procedures	76
6 SUPPLY MANAGEMENT.....	77
Task	77
Existing Support	77
Concept	77
Transfer of Responsibility	77
FESS	79
Central Warehouse	79
Workload Estimates	81
Training	82
Property Book	82
Organizational Procedures	82
USAR Assistance	82
Basic Procedures	85
7 PROCUREMENT MANAGEMENT.....	86
Tasks	86
Existing Support	86
Concept	86
Workload Definition	89
Contracting Authority	94
Implementation	94
Basic Procedures	94
8 STAFF ENGINEERING AND REAL PROPERTY MAINTENANCE MANAGEMENT DUTIES....	96
Staff Engineer	96
Real Property Maintenance Managers	97
9 CONSOLIDATION EVALUATION.....	100
Task	100
Concept	100
Subtasks	100
Advisory Groups	100
Approach	100
Data Collection	120
Training	121
Reports	121
10 CONSOLIDATION PLANNING.....	122
Task	122
Project Development	122
IPG Members	122
Project Guidance	123
Pre-IPG Activities	123
Command Support and Staffing	123
CPM Networks	124
Detailed Process Flowcharts	125
Alternate Approaches to Consolidation	125
Alternate Approaches to Forming IPGs	126

CONTENTS (Cont'd)

	<u>Page</u>
Establishing a Working Organization	129
Collecting Workload Data	130
11 SUMMARY AND CONCLUSIONS.....	131
Organization Development	
Financial Management	
Supply Management	
Staff Engineering and Real Property Maintenance Management Duties	
Procurement Management	
 METRIC CONVERSION FACTORS	 133
APPENDIX A: List of Abbreviations	134
APPENDIX B: Detailed Task CPM Networks	137
APPENDIX C: Detailed Process--Program Development and Financial Management	159
APPENDIX D: Detailed Process--CITA (Now CA: Commercial Activities Program)	191
APPENDIX E: TDA Yardstick Computations	197
APPENDIX F: Detailed Process--Installation Master Planning	203
APPENDIX G: Detailed Process--Supply	210
APPENDIX H: Detailed Process--Procurement Management	218
APPENDIX I: Survey Questionnaires	250
APPENDIX J: Data Collection Procedures	262
ANNEX J1: SO Sampling Procedures	263
ANNEX J2: IJO Sampling Procedures	267
ANNEX J3: Contract Project Sampling Procedures	272
ANNEX J4: SOO Data Collection Procedures	274
APPENDIX K: MDW Interservice Support Agreements	276
APPENDIX L: Detailed Process--Work Request	280
 DISTRIBUTION	

TABLES

<u>Number</u>		<u>Page</u>
1	SE Organization Staffing	98
2	RPMM Organization Staffing	98
E1	USAEA,CA Yardstick Computations	197
AJ1	Service Order Priorities	265
AJ2	Number of First SO to Sample for Each Shop	265
BJ1	Information Required for IJOs	270

FIGURES

1	Installations To Be Supported by USAEA,CA	23
2	FY79 Baseline Manpower Before Consolidation	23
3	General Consolidation Process	25
4	External Support Services (Estimated)	32
5	MDW Basic Workload Data	33
6	Service Order Count	34
7	Distribution of Individual Job Orders	35
8	Personnel Spaces Gained	36
9	Organizational Relationships	36
10	Staff Engineer/RPMM Relationships	38
11	Organization Development	39
12	USA Engineer Activity, Capital Area	40
13	Resource Management Division	40
14	Engineering Plans and Programs Division	41
15	Housing Management Division (MDW)	41
16	Supply Division	41
17	Operations and Maintenance Division	42

FIGURES (Cont'd)

<u>Number</u>		<u>Page</u>
18	Typical Real Property Maintenance Office	44
19	Space Distribution--MDW	44
20	Space Distribution--INSCOM	45
21	Space Distribution--DMAHTC	45
22	Space Distribution--WRAMC	46
23	Space Distribution--Fort Belvoir	46
24	TDA New Positions for USAEA,CA	47
25	USAEA,CA and MDW Staff Engineer Functional Distributions	48
26	Space Transfers	50
27	Support Personnel in Support of FE	51
28	USAEA,CA TDA Consolidation by Phases	51
29	Fort Belvoir Workload Factors	52
30	USAEA,CA Computer Network	56
31	Generalized Concept Financial Management	59
32	Financial Document Flow	59
33	IFS/COEMIS Interface General System Flow	63
34	Change in Overhead Rates	67
35	Cost Center Account Numbers	71
36	Cost Center Budget	72
37	Budget Support Documentation Personnel Computations	73
38	Budget Support Documentation	74
39	Budget Support Documentation Training	74
40	U.S. Army Engineer Activity, Capital Area MDW Staff Engineer Function Operating Budget	75
41	Supply Organizational Structure	78

FIGURES (Cont'd)

<u>Number</u>		<u>Page</u>
42	Transfer Service Centers from DCSLOG to USAEA,CA	80
43	Establishing the Warehouse System	80
44	Actions to Transfer RPMA Supplies	83
45	Actions to Transfer PB Items	84
46	Procurement Questionnaire	90
47	Workload Definition	93
48	Limits of Authority	95
49	Typical Installation Staff Engineer Organization	97
50	RPMM Organization (Typical)	99
51	RPMM Organization With CITA Contractor	99
52	Comparison of Actual Installation Overhead Rates to EA,CA Reimbursable Rates	102
53	Comparison of Shop Costs	104
54	Cost of Equipment Acquisition (Replacement Value and Annual Lease)	105
55	FE Obligation Comparison	107
56	Personnel Comparison	108
57	FE Performance Assessment by Installation Commander	109
58	FE Performance Assessment by Service Requesters	110
59	FE Performance Assessment by Family Housing Occupants	111
60	FE Performance Assessment by Workforce	112
61	On-Time Service Order Performance by Shop	113
62	Job Order Comparison	114
63	Over \$10,000 Contract Project Data Analysis	115
64	FE Shop Productivity Analysis	116

FIGURES (Cont'd)

<u>Number</u>		<u>Page</u>
65	Summary of FE Management Categories	117
66	Comparison of the Level of Maintenance Provided	118
67	Comparison of the FE Organization and Its Activities	119
68	Work Request Flow	127
B1	Task "A"--Develop the Detailed Organization Structure, Functional Responsibilities Required for a Phased Implementation of Centralized Consolidated Management and Execution of RPMA in the NCR	1
B2	Task "B"--Develop and Implement Those Actions Required to Transfer the Present MDW Engineer Organization to the USACE	11
B3	Task "C"--Develop the Detailed Financial Management Plan To Include Establishment of a Revolving Fund for Reimbursement	143
B4	Task "D"--Develop a Detailed Time-Phased Schedule for Transfer of Responsibilities to the NCR-RPMA Director	145
B5	Task "E"--Develop the Procedures Required to Transfer Implementation Responsibility From MDW to NCR-RPMA Director on 1 October 1980	147
B6	Task "F"--Determine the Personnel Actions Required for Position Classification and Personnel Transfers	149
B7	Task "G"--Determine Resource Savings, Manpower, and Dollars, Achieved Through Centralization/Consolidation, Based on Methodology Developed by OCE	151
B8	Task "H"--Develop Procurement Procedures	153
B9	Task "J"--Develop Automated Management Information Systems and Their Interfaces	155
B10	Task "K"--Schedule of the Transition of DCSLOG Engineer Supply Functions to DCSEH Including the Manual to Automated Modes	157

FIGURES (Cont'd)

<u>Number</u>		<u>Page</u>
C1	MCA Project Procedures	160
C2	Exigent Minor MCA, USAEA, CA Design and Construction Contract Procedure	161
C3	Engineer Activity, Capital Area, Financial Management Plan	166
C4	Procedures for Processing Reimbursable Orders (2544s)	169
C5	Financial Management of Contracts Greater Than \$10,000	172
C6	Financial Management of Contracts Less Than \$10,000	174
C7	Financial Management of Stock Fund Supplies	177
C8	Financial Management of the Purchase and Sale of Utilities	178
C9	Non-MCA Under \$10,000 (Option 1) Contracts, In-House Design and Construction Contract Procedure	180
C10	Non-MCA Over \$10,000 and Under \$10,000 (Option 2) Contracts, In-House Design and Construction Contract Procedure	184
C11	USAEA, CA Open-Ended AE Design Contract Procedures	188
D1	RPMA CITA Program Requirements, USAEA, CA	192
D2	RPMA CITA Program Requirements for New Starts and Expansions, USAEA, CA	195
F1	Installation Master Planning for MDW Installations	204
F2	Installation Master Planning for Non-MDW Installations	205
G1	Stock Replenishment of ASL (Authorized Stock List) (ASL--Based Upon Demands or Essentiality), AR 402-17	211
G2	Non-Stock Items Obtained From Federal Supply Source	213

FIGURES (Cont'd)

<u>Number</u>		<u>Page</u>
G3	Non-Stock Local Purchase Under \$10,000 Through Purchasing Annex	215
G4	Purchases Over \$10,000 Through Support District Purchasing	216
H1	Non-Stock Fund Purchases Less Than \$20,000	219
H2	Small Purchases Less Than \$10,000 (Services) (Includes GSA-FSS Purchases Greater Than \$10,000)	221
H3	Construction Projects Less Than \$10,000	222
H4	Contractual Actions Greater Than \$10,000 (Non-Stock Fund Supplies/Services)	225
H5	Contractual Actions Greater Than \$10,000 (Services)	226
H6	Contractual Actions Greater Than \$10,000 But Less Than \$100,000 (Construction) OMA	228
H7	Contractual Actions Greater Than \$100,000 But Less Than \$500,000 Maintenance and Repair	229
H8	Contractual Actions Greater Than \$100,000 But Less Than \$500,000 MCA Minor Construction With In-House Design	232
H9	Contractual Actions Greater Than \$100,000 But Less Than \$500,000 MCA (Minor--District Design)	234
H10	Contractual Actions Greater Than \$500,000 MCA (Major)	236
H11	Delivery Orders Against Requirements Contracts	238
H12	Change Orders Issued by Resident Contracting Officer (Construction)	240
H13	Request For Modification of Service Contracts	242
H14	Request For Modification of Contracts/Excludes MCA Major Contracts Over \$500,000 and MCA Minor Contracts Over \$100,000 But Less Than \$500,000 (Baltimore District)	243
H15	Imprest Funds--All Purchases (Not Over \$150--\$300 in Emergencies)	245

FIGURES (Cont'd)

<u>Number</u>		<u>Page</u>
H16	Blanket Purchase Agreement Less Than \$10,000 (Baltimore District)	247
H17	Open-End A/E Work Orders	248
AJ1	Sample Data Collection Form	266
BJ1	IJO Data Collection Form	268
CJ1	Design Project Data Collection Form	273
DJ1	SOO Data Collection Form	275

CONSOLIDATION OF RPMA ACTIVITIES IN THE NATIONAL
CAPITAL REGION, VOLUME 1: MAIN REPORT

1 INTRODUCTION

Background

A continuing objective of Department of Defense (DOD) policy and guidance is that real property maintenance activities (RPMA) functions at military installations in a given geographic area be consolidated when such action is cost-effective and does not impair the mission.¹ In accordance with this objective, the Engineer Studies Center (ESC)* was tasked with investigating the feasibility of consolidating RPMA for Army installations in the National Capital Region (NCR).² These installations include Fort Belvoir, Vint Hill Farms Station (VHFS), Arlington Hall Station (AHS), Fort Myer, Fort McNair, Cameron Station, Harry Diamond Laboratories (HDL), Walter Reed Army Medical Center (WRAMC), and the Defense Mapping Agency Hydrographic/Topographic Center (DMAHTC). ESC's study provided a highly workable concept and several major recommendations.

In May 1979, the Vice Chief of Staff of the Army (VCSA) directed that a plan be developed for the Chief of Engineers (COE) to assume responsibilities for RPMA throughout the Continental United States (CONUS). This short-term study³ developed the concept of using regional work centers to assume RPMA responsibility, with most of the work performed by commercial/industrial-type activities (CITA) contractors. Under this concept, the workload would be transferred from in-house to a contractor under Corps supervision, and then, when feasible, to regional work centers. Of the three potential work centers identified, the National Capital Region Center was the most promising.

In October 1979, the VCSA rejected the CONUS-wide concept developed by the RPMA ad hoc planning group and directed that RPMA consolidation be tested in the NCR.⁴ The objectives of consolidation were:

1. To determine the feasibility of consolidating RPMA in the National Capital Region into a single Corps of Engineers organization completely funded on a reimbursable basis.

¹Consolidation of Real Property Maintenance Activities (RPMA) at Military Installations in the Washington, D.C. Area, Assistant Secretary of Defense (Installations and Logistics) (ASD[I&L]) Memorandum (4 April 1977).

²Consolidation of Real Property Maintenance Activities (RPMA) at Army Installations in the Washington, D.C. Area, Memorandum for Engineer Studies Center, DAEN-FEZ-B (19 January 1978).

³Draft Implementation Plan for Centralized Execution of the CONUS RPMA Mission, Prepared by the RPMA Ad Hoc Planning Group, Office of the Chief of Engineers (16 July 1979).

⁴DACS-DPD Memorandum for Members of the Select Committee, 24 October 1979, subject: "CONUS RPMA Execution--SELCOM Minutes."

*Appendix A lists abbreviations used in this report.

2. To determine the feasibility of such an organization providing the same or better quality of maintenance at no increase in cost to various installations with unique requirements and representing several Major Commands.

3. To develop a technique for measuring the effectiveness of the new organization over time that could be used to support consolidation activities in other geographical areas.

The responsibility for developing the implementation plan was given jointly to COE and the Commanding General of the Military District of Washington (CG, MDW). The joint COE and MDW proposal was submitted to the VCSA and approved in December 1979.⁵ This letter, hereafter referred to as the Tasking Letter, established the scope of the consolidation effort, responsibilities for planning, developing, and testing the concept, and a time schedule for a phased implementation of the concept. Pertinent portions are provided below:

1. Facility engineering functions for eight installations will be consolidated under the U.S. Army Engineer Activity Capital Area (USAEA,CA) in three phases. An evaluation will be made at the end of each phase; consolidation will continue if the expected benefits are being realized. Phases and sites are listed below; DMAHTC was originally listed as Phase I but delayed into Phase III in recognition of some unique system interfacing problems which need to be addressed.

Phase I: Military District of Washington (MDW)--Cameron Station, Fort McNair, and Fort Myer

Phase I: Intelligence and Security Command (INSCOM)--Arlington Hall Station and Vint Hill Farms Station

Phase II: U.S. Army Training and Doctrine Command (TRADOC)--Fort Belvoir

Phase III: Hospital Services Command (HSC)--WRAMC; and Defense Mapping Agency Hydrographic/Topographic Center (DMAHTC).

2. Installations under the consolidation will retain the responsibilities to plan, program, and budget for RPMA requirements and will accomplish RPMA through USAEA,CA on a reimbursable basis. A Staff Engineer will be responsible for the FE functions retained at each installation.

3. USAEA,CA will be part of the USACE Division/District structure and will function in accordance with existing USACE regulations and procedures. Contracting and purchasing support will be provided by an existing District Office. The Director, USAEA,CA, will serve in a dual function as the MDW Staff Engineer and Commander and Director, USAEA,CA.

4. The Commander, MDW, and the Chief of Engineers will form an Implementation Planning Group to accomplish the planning needed to establish the USAEA,CA organization and to ensure an orderly transition from the existing site-unique organizations into USAEA,CA. Establishing USAEA,CA as a separate

⁵Memorandum for Vice Chief of Staff of the Army, 18 December 1979, subject: "Real Property Maintenance Activities (RPMA) Centralization and Consolidation in the National Capital Region (NCR)--Decision Memorandum."

USACE function required that the organization operate independently from base support normally furnished to the Facilities Engineer. With the transfer of the functions to USAEA,CA, the installations were directed to transfer an appropriate number of RPMA spaces to USAEA,CA and its supporting organizations.

5. Consolidation must be in accordance with the schedule given below:

<u>Installation</u>	<u>Consolidate Into USAEA,CA</u>
<u>Phase I</u>	
Cameron Station	1 Oct 80
Fort Myer	1 Oct 80
Fort McNair	1 Oct 80
Arlington Hall	FY81
Vint Hill Farms	FY81
<u>Phase II</u>	
Fort Belvoir	FY83
<u>Phase III</u>	
WRAMC	FY84
DMA HTC	FY84

6. On-going and planned CITA reviews will be completed as planned. The USAEA,CA must be prepared to manage all resulting CITA contracts and provide services where functions are not contracted.

Command Response to Proposed Concept

The consolidation concept failed to attract active support from any of the installations involved. The following comments provided by INSCOM and DMA give a better understanding of the environment in which the IPG operated and highlight some of the concerns addressed in developing the implementation plan.

The primary INSCOM responses⁶ to the proposals were:

1. Spaces at AHS are cryptologic resources and are within the National Foreign Intelligence Program (NFIP). Transfer of these spaces requires coordination with INSCOM's Director of Central Intelligence.

2. Vint Hill Farms Station lies outside the NCR; therefore, because of the travel distance to the site from metropolitan Washington, additional consideration must be given to economic effects.

3. About 80 percent of the Facility Engineer's time is spent in special access areas. The expense of providing access clearance for additional personnel must be considered.

4. Because of the base realignment study directed by the Department of the Army (DA), there is concern about the impact of future turbulence within INSCOM.

DMA added the following points:⁷

1. The HTC is the only non-Army installation to participate in the consolidation.

2. The HTC is the only industrial site to participate in the consolidation. The IPG has not recognized the significant difference between industrial-funded and RPMA-funded installations, and the attendant impact on operations.

3. There are misgivings about the use of the Corps of Engineers' "Revolving Fund."

4. No cost savings are predicted for 5 years. DMA cannot afford the threat of mission impact without a chance of realizing significant cost savings.

5. The HTC does not use the Integrated Facilities System (IFS), and implementation of the system would be expensive.

6. HTC uses the Air Force logistical system; conversion of the RPMA portion to the Army system would create extensive confusion which could not be solved by the HTC's logistic capability.

⁶IACG letter, 20 June 1978, subject: "Consolidation of Real Property Maintenance Activities (RPMA) at Army Installations in the Washington, DC, Area"; IACG letter, 15 September 1978, subject: "Consolidation of RPMA at Installations Within the National Capital Region (NCR)"; IACG letter, 21 December 1979, subject: "RPMA Centralization in the National Capital Region (NCR)"; IALOG-IF letter, 23 April 1980, subject: "Installation Facilities Engineering Organization After Consolidation Under the U.S. Army Engineer Activity in the Capital Area (USAEA,CA)."

⁷Memorandum for Deputy Assistant Secretary of Defense (Installations and Housing) (31 March 1980).

7. The Army has not yet established a supply account to support the RPMA.
8. HTC has unique security requirements.
9. There is concern about duplicating overhead costs and about having to pay for services which are now free.
10. There is concern about being in two separate command chains.

CITA Responsibilities

Before the NCR consolidation test was begun, schedules had been established for evaluating the option of contracting out portions of the FE activities under the CITA provisions. The schedule for CITA reviews and possible contract implementation for NCR installations is:

<u>Installation</u>	<u>CITA Review</u>	<u>Implement Contract</u>
Phase I -		
Cameron Station	FY80	FY81
Fort Myer	FY81	FY82
Fort McNair	FY81	FY82
Arlington Hall	FY80	FY81
Vint Hill Farms	FY80	FY81
Phase II -		
Fort Belvoir	FY82	FY83
Phase III -		
WRAMC	FY83	FY84
DMAHTC	FY81	FY82

This schedule may mean that an installation DFE may be going through the CITA review and adjusting its organizations to reflect that impact during the same period that its functions are being consolidated into the USAEA,CA. It was unsuccessfully proposed that CITA-related activities be suspended until the consolidation test was completed to help ensure that the test produced usable data for future consolidations.

In examining the CITA reviews scheduled, it was found that the proposed contract award dates were spread throughout the year. This introduces two additional problems. First, the approach eliminated the possibility of using regional contracts which should be more efficient than contracts by individual installation. If CITA contracts shared common anniversary dates, it would be easy in the future to consider combining contracts to achieve greater efficiencies and reduce management costs.⁸ Once contracts are awarded, it is difficult to change contract periods to get a common termination date. Second, the consolidation evaluation process is basically terminated for the

⁸ANNCR Memorandum, 27 May 1980, DACA3180-R000.

installation with award of the CITA contract. For example, assume that USAEA,CA takes over the FE responsibilities of an installation and operates it successfully for several months before a CITA contract is awarded. Upon award, the USAEA,CA becomes the contract manager. At the end of the year, the effectiveness of the USAEA,CA cannot be directly compared to that of the former dedicated FE organization. Effectiveness gains or losses realized during the year may be related to the contractor's activities, or to USAEA,CA activities, or to some combination of both. A comparison can only be made of the service performed for the invested resources, but no conclusions can be drawn with regard to the effectiveness of consolidation.

Objective

The objective of this report is to document the implementation planning and activation activities done between January and September 1980 to establish the U.S. Army Engineer Activity, Capital Area (USAEA,CA) organization for consolidation of RPMA.

Approach and Organization of Report

The IPG was formed and its functions defined within several tasks. The tasks were carried out by various groups appointed from within the IPG. Following activation of the consolidated organization, recommendations for future efforts were developed based on lessons learned.

This report is the first of four reports documenting consolidation planning activities. Volumes II through IV are documents collected/generated during the IPG period and are unpublished.

- I--Main Report
- II--Supplementary Material
- III--Organization Development Documentation
- IV--Computer Systems, Procurement Workload Data, and Staff
Function Documentation

2 BACKGROUND OF INSTALLATIONS IN THE PROPOSED CONSOLIDATION AREA

Consolidation Area

The facility engineering support to the following eight installations, representing five major commands, is included in the consolidation. Figure 1 shows the locations of the installations in the National Capital Region.

Military District of Washington (MDW) is made up of three installations: Fort McNair, located in the Washington, DC, area; Fort Myer, across the Potomac from Washington, DC; and Cameron Station, located about 10 miles* west of Washington, DC. RPMA forces at MDW maintain 4,152,000 sq ft of facilities, 620 acres of land, including 506 improved acres, and about 500,000 sq yd of surfaced areas. The three installations serve a total population of about 33,500. During FY80, the MDW DCSEH had 432 personnel to maintain all three installations and a budget of \$21.63 million for all activities other than operation of utilities.

Arlington Hall is an Intelligence and Security Command (INSCOM) site, located near Fort McNair, west of Washington, DC. The installation serves a population of about 28,000. The Facilities Engineer (FE) maintains 906,600 sq ft of facilities, grounds of 87 improved acres, and 125,000 sq yd of paved surfaces. During FY80, the FE organization had 98 personnel and a budget of \$2.97 million for all activities other than operation of utilities.

Vint Hill Farms is an INSCOM site located about 40 miles west of Washington, DC. All FE functions are being provided under a CITA contract. The contractor maintains 1,117,000 sq ft of facilities, 201 acres of improved grounds, and about 300,000 sq yd of paved surfacing. The FY80 budget for the post was \$2.01 million for all activities other than operation of utilities.

Walter Reed Army Medical Center (WRAMC) is a Health Services Command (HSC) installation located in Washington, DC. The FE organization serves a population of 9700 which occupy 6,088,000 sq ft of building space. During FY80, the FE organization contained 322 personnel and had a budget of \$12.31 million for all activities other than operation of utilities.

Fort Belvoir is a U.S. Army Training and Doctrine Command (TRADOC) installation located about 15 miles south of Washington, DC. The post encompasses about 9239 acres, of which 4886 acres are improved. The FE organization serves a population of 16,660, which occupy 8,673,000 sq ft of building space. During FY80, the FE organization had 390 personnel and a budget of \$16.29 million for all activities other than operation of utilities.

Defense Mapping Agency Hydrographic/Topographic Center is a DOD installation located in Washington, DC. The FE organization maintains 23 buildings, containing 890,000 sq ft, on an installation of 56 acres.

*Metric conversion factors for English measurements are provided on p 133.

Current Mode of Operations

Before consolidation, all organizations operated as separate engineer activities except those in MDW which, in many ways, were consolidated with the MDW DCSDEH. The Facilities Engineers served as the Engineer Officers on the installation commanders' staff, were responsible for accomplishing all engineering activities, and were technically managed by the MACOM Engineers. The relationship is illustrated in Figure 2. Within MDW, all support functions (e.g., personnel, finance, payroll, legal), planning, supplies, engineering, and budgeting were provided at the MACOM level for the three installations. Within INSCOM, all purchasing and contracting activities were done at AHS. At the time of baselining (FY79), MDW had 450 FTE spaces in its engineer organizations, with an annual budget of \$25.96 million, and INSCOM had 202 FTE spaces, with an annual budget of \$6.15 million. Indirect support was provided by 40 people at MDW and by 15 people at INSCOM.

Before consolidation, the MDW Facilities Engineer received the following procurement and contracting support from other organizations.

1. All supplies were requisitioned from the DCSLOG central warehouse at Cameron Station. The DCSLOG maintained the central warehouse and an annex warehouse at each installation with FE supplies ordered from General Services Administration (GSA). Requisitions for non-GSA stock items were submitted by DCSLOG to DCSACQ for requisition by the most appropriate method. Supplies were acquired by DD 1155 (open market), Imprest Fund, and calls/orders against established blanket purchase agreements (BPAs).

2. RPMA and other service contracts were procured by DCSACQ and administered by FE personnel with Contracting Officer's Representative (COR) authority.

3. A/E support on maintenance, repair, and some minor construction was provided by open-end A/E contracts negotiated and awarded by the Baltimore District. The Facilities Engineers negotiated individual work orders against the contract, and DCSACQ awarded the negotiated work order. The Baltimore District administered A/E support on MCA, some K and L accounts, and other (reimbursable) construction.

4. The Baltimore District managed MCA construction, minor and OMA construction, and other (reimbursable, etc.) construction. All remaining contract construction was procured through DCSACQ, with COR authority delegated to the Facilities Engineer. Administration was primarily by DCSACQ.

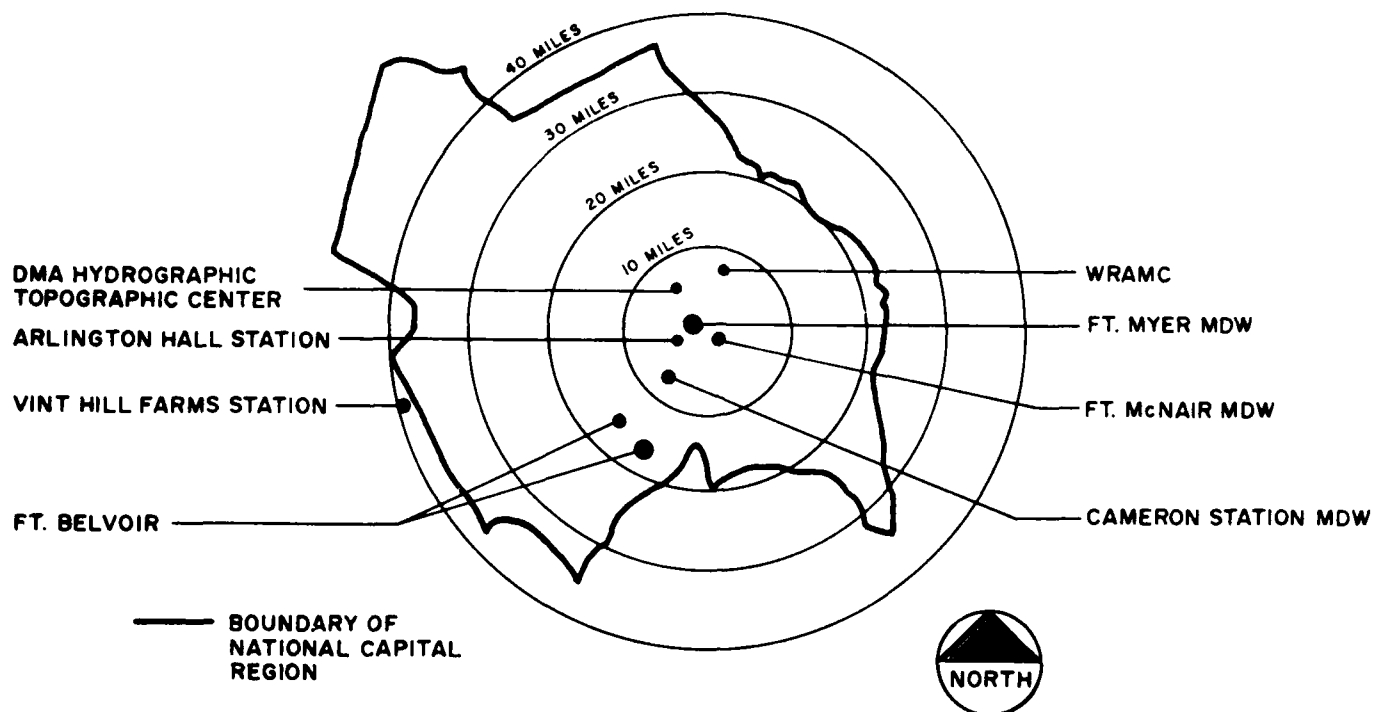


Figure 1. Installations to be supported by USAEA,CA.

FY79 Baseline Manpower (Full-Time Equivalent Man-Years)

	MDW	VIHFS	AHS	INSCOM	FT. Belvoir	WRAMC
FE	450. ¹	82. ²	120.	202.	362.	297. ⁴
Centrally Performed Functions:						
Supply	16.	--	1.90	1.90	2.5	2.
CPO	4.	.58	2.53	2.97	5.	5.
F&A	7.	.26 ³	0.93 ³	1.18	39.5	4.
Procurement	12.	5.55	3.65	9.20	6.	2.
Payroll	1.	--	--	--	1.7 ⁶	1. ⁵
Legal	.33	--	0.10	0.10	--	--
Total FE	490.33	88.39	129.14	217.35	416.7	311.

¹Includes Fort McNair, Fort Myer, and Cameron Station.

²Includes FE Supply Division.

³Includes F&A support, 0.08 at each installation. MDW FAO support of 0.16 at VIHFS and 0.86 at AHS are included.

⁴Includes military and overtime.

⁵Includes legal and WSO.

⁶Includes legal and MISO.

Figure 2. FY79 baseline manpower before consolidation.

3 IMPLEMENTATION PLANNING GROUP (IPG) Organization

Approach

Figure 3 shows the general implementation planning process from the command decision to initial consolidation at MDW. Some of these steps are not necessarily sequential. Activities in steps 1 through 6 were discussed on pp 15-23. This report concentrates on activities 7 through 20, primarily covering the IPG activities leading up to the activation of USAEA,CA. The IPG addressed six functional areas, and their activities are discussed in Chapters 4 through 9.

Formation of the Implementation Planning Group

In accordance with the Tasking Letter, an IPG was formed at Fort McNair on 2 January 1980 and charged with completing the work needed to consolidate FE functions in MDW by 1 October 1980. The IPG was composed of the following personnel, plus an administrative support staff.

COL J. Trayers, Chairman
Mr. B. Dunn, Deputy
Mr. W. H. Garner, OCE
Mr. Don Adams, Norfolk District Office
Mr. Cal Pierce, Baltimore District Office
LTC Lonnie Williams
Mrs. Ruth Ford, MDW
Mr. Robert Brenneman, FESA
Mr. Cletus Roberts, DAEN-RMF-C
Mrs. Rita J. Boley, MDW, DCSEH
Mr. Jim Hershey, Baltimore District Office
Mr. Jerry Barnes, Norfolk District Office
Mr. Joe Whitaker, DAEN-ZCF-M
Mr. Richard Rice, MDW, DCSEH

Other personnel from the Huntsville Division Office (HND), the U.S. Army Construction Engineering Research Laboratory (USA-CERL), and Facility Engineering Support Agency (FESA) were tasked with providing part-time support during the planning stages and providing several special stand-alone tasks.

Several advisory and working groups were formed to assist the IPG. A Steering Committee, chaired by the MDW Commander, was formed at the command level to ensure coordination and cooperation. The committee was composed of the following members:

1. Commander, MDW--Chairman
2. Division Engineer, North Atlantic Division, USACE
3. Division Engineer, HND, USACE
4. Director of Management, HQDA

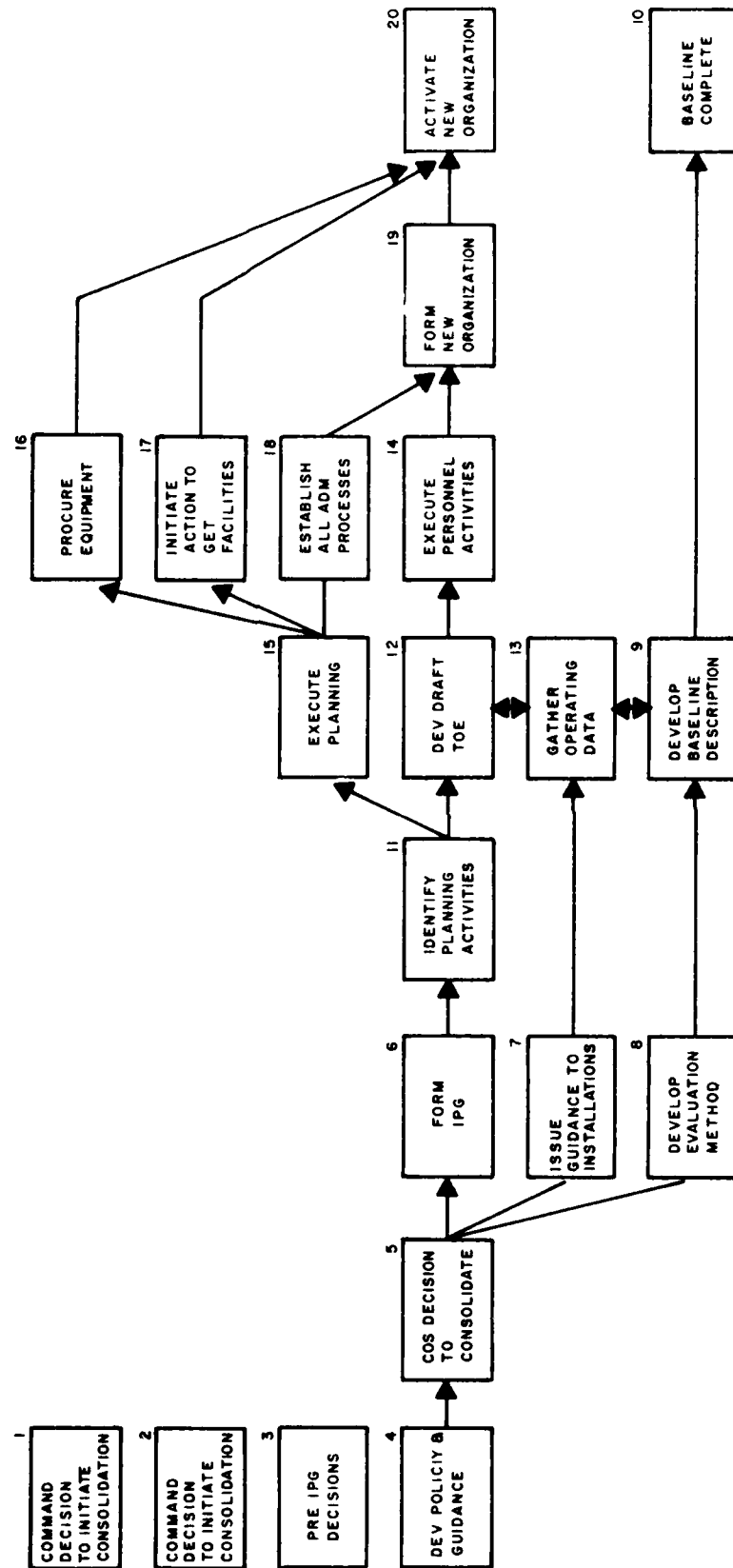


Figure 3. General consolidation process.

5. Director of Military Programs, OCE
6. Commander, TRADOC
7. Commander, HSC
8. Commander, INSCOM
9. Commander, DMA.

Organization

The IPC was formed into several teams to address the following tasks:

Task A--Develop the detailed organization structure, business processes, and functional responsibilities required for phased implementation of centralized/consolidated management and execution of RPMA in the NCR.

Task B--Develop and implement actions required to transfer the present MDW engineer organization to the USACE.

Task C--Develop a detailed financial management plan to include establishment of a revolving fund for reimbursement.

Task D--Develop a detailed time-phased schedule for transferring responsibilities to the USAEA,CA Director.

Task E--Develop the procedures required to transfer implementation responsibility from the MDW to the USAEA,CA Director on 1 October 1980.

Task F--Determine the civilian personnel actions required for matters such as position classifications and personnel transfers.

Task G--Determine resource savings--both manpower and dollars--which will be achieved through centralization/consolidation, based on the methodology developed by OCE.

Task H--Develop procurement procedures.

Task I--Develop Staff Engineer functions that installation commanders will retain after consolidation.

Task J--Develop automated management information systems interfaces.

Task K--Develop supply procedures. (This team was not included in the Tasking Letter but was added by the IPC chairman to ensure a comprehensive plan.)

Planning Schedule

HND was tasked with preparing time-phased schedules in cooperation with all teams. Originally, the time-phased schedules stressed identifying the

activities, interfaces, and decision points involved in planning and activating the USAEA,CA. Late in the planning period, network charts were prepared to describe each of the management/administrative processes that the USAEA,CA would use after activation. However, as operational plans were developed, the effort concentrated on detailing the transition activities. Appendix B provides the complete implementation schedule.

During the IPG period, several changes were made in the task definitions:

1. Task E was eliminated with the appointment of the Director, USAEA,CA, to the position of Deputy Chief of Staff for Engineering and Housing (DCSEH), MDW, on 27 July 1980.

2. Task F was expanded to include initiating and completing all personnel activities needed to transfer personnel into USAEA,CA from existing organizations and to recruit to fill vacancies.

3. Task G was redefined to require development of a method for determining the effectiveness of a Facilities Engineering organization and for establishing a baseline of the RPMA services now being provided. The method to be developed will be used at scheduled times in the future to establish the impact of the new organization by comparing its effectiveness with the baseline values.

4. Task J was redefined to (1) help provide a Facility Engineer Supply System (FESS) on-site and make it operational by the scheduled date, (2) help operating personnel improve the accuracy of IFS, (3) assist with the installation of IFS on sites not already on the system, and (4) help develop an IFS/Corps of Engineers Management Information System (COEMIS) interface program for financial management.

Responsibilities

IPG team members were assigned the following basic responsibilities:

1. Examine all guidance and MDW organizations and procedures.
2. Decide actions to be taken and time requirements/constraints, and develop a comprehensive plan showing all requirements and decisions.
3. Determine areas of expertise and functions for which help will be needed.
4. Identify agencies which should participate in the planning or which have approval authority related to items to be developed, and identify a point of contact.
5. Identify a point of contact in the organizations expected to be affected by implementation of the USAEA,CA.
6. Form committees and/or working groups as needed.

7. Execute the approved plan which will lead to successful USAEA,CA implementing on 1 October 1980.

Outside Assistance

With the short time available for the IPG to complete the planning, an effort was made to maximize the use of expertise in other organizations and to ensure that the plan could be implemented by 1 October 1980. For example, optional techniques for providing support were discussed with the appropriate managers in the two candidate District offices, and their assistance was sought in developing some of the more complex procedures. When the Baltimore District was tasked to support the USAEA,CA, additional District personnel were brought into the activity to develop detailed procedures that would be compatible with their operations. FESA was given the task of developing the IFS/COEMIS interface and helping MDW reduce their IFS error rate.

Coordination

To ensure command cooperation and acceptance of the evaluation methodology, HND and CERL formed two advisory groups. The Study Advisory Group, made up of Facilities Engineers, was formed to handle command communications and cooperation. The Facilities Engineers Coordinating Group (FECG) was made up of Facilities Engineers' staff personnel familiar with existing records and work measurement methods to help identify the best data sources; this would ensure that the baseline data accurately represented the workload and maintain a cooperative effort in collecting the data.

Management

IPG activities were managed through the use of the time-phased networks developed by team members in conjunction with HND. Periodic reviews were made of the progress, and the schedules were revised accordingly. The schedules tended to become more detailed as the work progressed and requirements became better defined. Appendix B contains the final detailed CPM networks indicating activities, sequence of activities, and time durations of activities required to complete the implementation planning.

Support District Office

In developing the IPG organization, Baltimore and Norfolk District Offices were identified as the prime candidates providing procurement support. Therefore, personnel representing both organizations were selected to serve on the IPG. The process to select the Support District examined the experience of both offices in performing similar functions, and their capability to provide responsive support under existing conditions.⁹ The final decision was to give the Baltimore District the task of supporting USAEA,CA.

⁹IPG Memo, 9 May 1980, subject: "Advantages of Norfolk District Providing Procurement and Other Support to USAEA,CA"; IPG Memo, 9 May 1980, subject: "Advantages of Procurement Support Being Provided by Baltimore District."

Since both District Offices had appropriate experience and technical capability, the decision was primarily based on the USAEA,CA operating with existing Baltimore boundaries of responsibility and being considered more accessible to the NCR due to its geographical location.¹⁰

Activation

USAEA,CA was activated on 1 July 1980 as an element of the U.S. Army Engineer Division, North Atlantic, with Fort McNair identified as the initial duty station.

¹⁰DAEN,MPR, First Indorsement, 29 July 1980, subject: "Contracting Authority Limits."

4 ORGANIZATION DEVELOPMENT

Task

The Organization Development Task Group was tasked with the following:¹¹

1. Develop the detailed organizational structure, business processes, and functional responsibilities required for a phased implementation of centralized/consolidated management and execution of RPMA in the NCR.
2. Develop and implement actions required to transfer the present MDW Engineer Organization to the USACE.
3. Develop a detailed time-phase schedule for transferring responsibilities to the NCR-RPMA Director.*
4. Determine the civilian personnel actions required for jobs such as position classifications and personnel transfers.

Concept

The concept, defined during the IPG period, called for the USAEA,CA organization to be structured to match the more conventional DEH organizations. Engineering and management functions being performed at each installation were to be consolidated into USAEA,CA Headquarters. Dedicated direct-service shops and personnel were to be retained to perform the maintenance and repair at each installation served. The new organization, USAEA,CA, was to be funded on a reimbursable basis, charging the recipients for the services rendered. As a CE organization, all supporting activities such as procurement, personnel, supply, and legal were to come from CE sources since it would no longer be eligible for "free" support from the host installation. To minimize any adverse manpower effects, the concept included transferring functions, spaces, and existing employees from the installation organizations to the new organization wherever possible.

Subtasks

The group had four major development tasks:

1. Develop the initial USAEA,CA organization structure
2. Prepare Functional Statements

¹¹ DACA-DMA Letter, 18 December 1979, subject, "Real Property Maintenance Activities (RPMA) Centralization and Consolidation in the National Capital Region (NCR)."

* The task is listed as a separate task but it was accomplished as an integral part of the other major tasks.

3. Prepare the TDA

4. Develop the process for planning future USAEA,CA expansion.

The group addressed the problem of transferring personnel spaces among organizations; it also provided support to OCE in initiating the personnel actions needed to effect the transfers and the recruitment for filling vacancies. This chapter addresses these subtasks. This activity did not terminate with 1 October 1980; instead, the thrust changed to planning for consolidation of the other installations into USAEA,CA.

Workload Definition

Much of the work performed by the group depended on the quantity of work to be performed by various elements. A continuing effort was made to obtain or refine existing workload estimates. Two types of workload were defined:

1. The number of equivalent man-years of effort being provided by installation functions which had to be replaced by support from Corps of Engineers (CE) functions. The effort to estimate the amount of installation support provided to the DEH's was not fully successful. A survey was made by requesting each impacted organization to quantify its FE-related workload. The results¹² are given in Figure 4. The MDW estimates were developed by the MDW Deputy Chief of Staff for Resource Management (DCSRM). The information given in the figure may not reflect realistic estimates, based on USAEA,CA estimates from workload figures; however, it does illustrate the different types of support being provided and the variation among installations. The figures provided may be low, since they are based on undocumented, estimated summaries of time dedicated to each task by several people. Losing organizations may have underestimated the amount of support provided to minimize the eventual impact. No guidance had been given to the installations concerning actions to be taken to facilitate producing the data needed by the IPG. Records and files of interest were not current. IPG personnel assisted existing organizations in updating the personnel listings and reconciling them with job assignments before the analysis could be made.

2. The direct RPMA workload was defined in terms of the number of transactions processed and the dollar volume. MDW basic workload data were collected and analyzed; results are given in Figures 5 through 7. The workload analysis included comparing the volume of transactions or work accomplished to the number of personnel in each of the organizations supporting the FE. Workload data were collected for the 6-month period ending 28 March 1980. During this period, 9880 Service Orders were processed. Assuming an average weekly workload of 395, the projected yearly total would be 20,548. Figure 5 provides the distribution of Service Orders by MDW installations, and Figure 6, the distribution by shop. Figure 7 tabulates the Individual Job Orders and Job Order Requests during the same sampling period. Projected workload, listed in Figure 5, indicates a total of 2150 Job Order Requests, 596 Individual Job Orders, 116 Standing Operations Orders, and 338 Service Contracts under \$10,000. The estimated number of transactions in

¹²ANNCR letter, 8 Jul 80, subject: "Installations Support Provided to Installation Facilities Engineer."

<u>Support Functions</u>	<u>Vint Hill MDW</u>	<u>Farms</u>	<u>Arlington Hall</u>	<u>Fort HTC</u>	<u>Belvoir</u>	<u>WRAMC</u>
Accounting Support	1	0.5	0.13		1.35	
Payroll	1				0.47	
Communications				1.0		
Legal	1				0.06	
Military Personnel						
MISO					0.78	1.0
Movements						
Organization Maintenance			0.50	0.4	9.00	
Purchasing &						
Contracting	14.7	9.2	*	5.0	9.00	7.0
Supply	3.2		2.50	2.0	2.00	1.0
Transportation						
Civilian Personnel	3	0.4	2.53	1.9	3.40	0.5
Other	—	—	—	—	—	1.4
Totals	23.9	10.1	5.66	10.3	26.06	10.9

*Purchasing and contracting for AHS is done by VHFS.

Figure 4. External support services (estimated).

the last three categories passing through the shops is much greater than the workload seen by USAEA,CA Headquarters. Based on the workload analysis and the updated personnel lists, the number of support spaces was calculated. A total of 23 spaces were identified, as compared to the MDW prepared estimate of 23.9. Figure 8 identifies the spaces to be transferred and the gaining agency. The MDW CPO was tasked¹³ with initiating the transfer of the personnel spaces with OCE, and reconciling the difference between the MDW and IPG estimates.

Structure

By design, the USAEA,CA is part of the CE North Atlantic Division (NAD) and will perform RPMA on assigned installations through on-site teams. Rather than forming an essentially self-supporting organization with all staff functions, the decision was made to expand the expertise already available in a District office to support the USAEA,CA. Figure 9 illustrates the new organizational relationships within the CE and with the installation customers. OCE, in addition to its traditional management responsibilities,

¹³ANNCR letter, 8 Jul 80.

A. General. Data shown below were collected and organized to be used in initial staffing of USAEA,CA. An actual work authorization document count was made from the best information available for a 25-week period, and this information was then projected for FY81.

B. Summary of Work Count:

1. Service Orders (SOs)	20,547
2. Job Order Requests (JORs)	2,150
3. Individual Job Orders (IJOs)	596
4. Standing Operations Orders (SOOs)	124
5. Service Contracts Data	388
Total Work Authorization Documents	24,107

C. Work Authorization Document Distribution. (Projected FY data)

<u>Type of Document</u>	<u>Cameron Station</u>	<u>Fort McNair</u>	<u>Fort Myer</u>	<u>Total</u>	
Service Order (DA Form 4287)	4,821	4,305	11,421	20,547	
Job Order Request (DA Form 4283)	345	495	1,310	2,150	
Individual Job Order (DA Form 4284)					
By Count	130	204	262	596	
By Phases	498	844	2,502	3,844	
By Shop	538	350	610	1,498	
Standing Operations Order (DA Form 4284)					
By Count	52	31	33	116	
By Phases	111	114	196	421	
By Shop	22	82	20	124	
Service Contracts (Under \$10,000) (DA Form 4286)					
Accounts:	J	K	L	M	Totals
By Count	4	226	42	66	338
By Phase	8	452	84	132	676

Figure 5. MDW basic workload data.

Service Order Count and Shop Distribution for MDW (DA Form 4287)
Period Covered: 28 September 1979 to 28 March 1980

Shop No. Name	<u>Cameron Station</u>		<u>Fort McNair</u>		<u>Fort Myer</u>		<u>Total</u>
	Service Orders	Projected FY Total	Service Orders	Projected FY Total	Service Orders	Projected FY Total	Projected FY Total
01 Carpentry	428	890	754	1,568	934	1,943	4401
02 Electrical	958	1993	415	863	1,002	2,084	4940
03 Plumbing	416	865	493	1,025	1,395	2,901	4791
04 Metal	161	335	0	0	296	616	951
05 Paint	3	6	146	303	195	406	715
06 Refrig/AC	175	364	171	356	699	1,454	2174
08 RDs/GNDs	16	33	15	31	81	168	232
10 Prev. Maint.	0	0	5	10	131	272	282
30 Heating Plant	56	117	29	60	625	1,300	1477
20 Fire Insp/Dept	2	4	0	0	0	0	4
21 Entomology	102	212	43	89	96	200	501
75 Sign	<u>1</u> 2,318	<u>2</u> 4,821	<u>0</u> 2,071	<u>0</u> 4,305	<u>37</u> 5,491	<u>77</u> 11,421	<u>38</u> 20,547

Source: Service Order Registers at Fort Myer, Fort McNair, and Cameron Station.

Figure 6. Service Order count.

Distribution of Individual Job Orders and Job Order Requests
(Period: 28 September 1979 Through 28 March 1980)

Job Orders by Phase

Shop No. Name	<u>Cameron Station</u>		<u>Fort McNair</u>		<u>Fort Myer</u>		<u>Totals</u>	
	Job Orders	Projected FY Total	Job Orders	Projected FY Total	Job Orders	Projected FY Total	Job Orders	Projected FY Total
01 Carp.	45	94	73	152	199	414	317	60
02 Elect.	60	125	49	102	428	890	537	1117
03 Plumb.	21	44	24	50	32	66	77	160
04 Metal	35	73	0	0	168	349	203	422
05 Paint	9	19	72	150	52	108	133	277
06 Refrig/AC	33	68	189	393	34	70	256	531
08 RDs/GNDs	26	54	13	27	166	345	205	426
10 PM	5	10	0	0	9	19	14	29
30 Heating Plant	7	14	0	0	9	19	16	33
75 Sign Shop	7	14	2	4	152	316	161	334
24 Custodian	1	2	0	0	2	4	3	6
	<u>249</u>	<u>517</u>	<u>422</u>	<u>878</u>	<u>1251</u>	<u>2600</u>	<u>1922</u>	<u>3995</u>

Job Order and Job Order Requests by Station

	<u>Cameron Station</u>	<u>Fort McNair</u>	<u>Fort Myer</u>	<u>Total</u>
Individual Job Orders	175	269	305	749
Job Order Requests*	65	102	131	298

*Reflects estimated JORs only.

Source: Work Coordination Branch, Fort Myer

Figure 7. Distribution of Individual Job Orders.

<u>Support Functions</u>	<u>MDW</u>	<u>Gaining Usage Agency</u>
Accounting Support	1	Supporting District
Payroll	1	Omaha District
Judge Advocate General (Legal)	-	Supporting District
Procurement and Contracting	15	Supporting District
Supply	3	Supporting District
Civilian Personnel	3	USACE OCPO, Pulaski Bldg.
	<u>23</u>	

Figure 8. Personnel spaces gained.

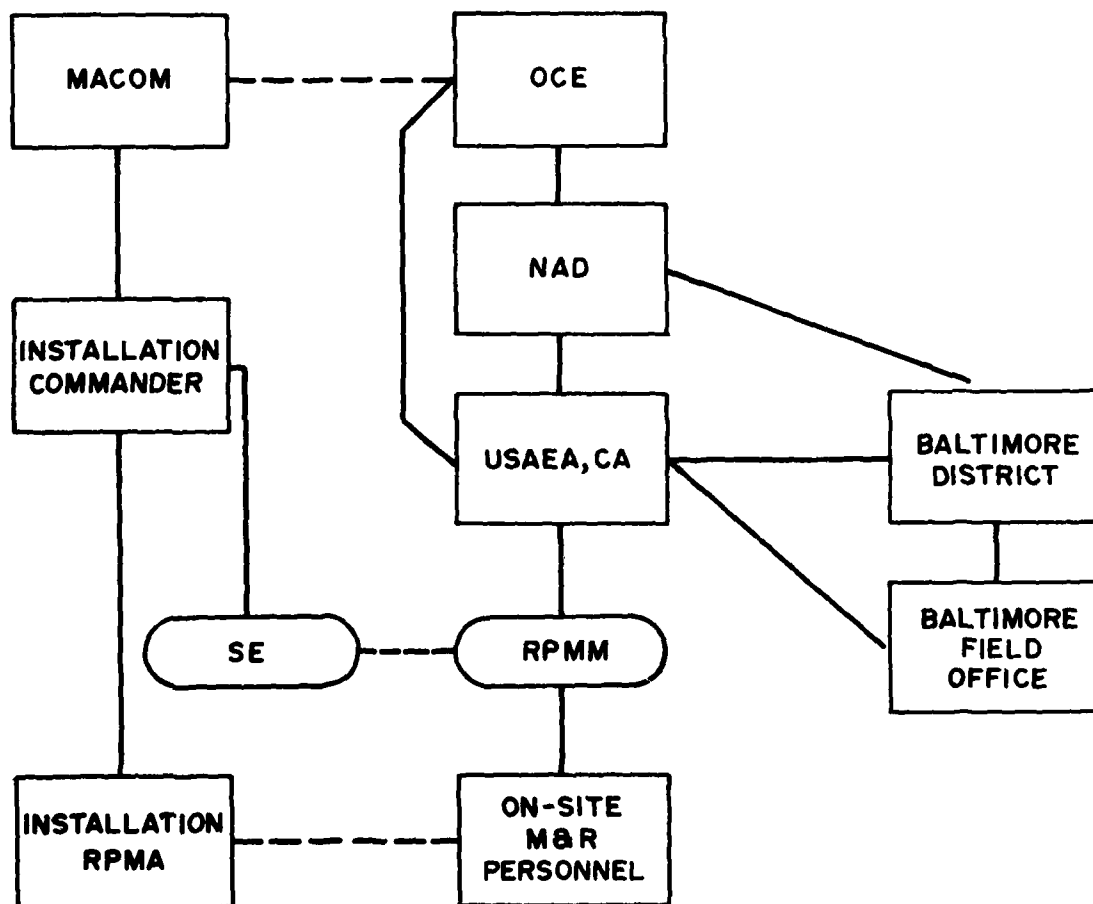


Figure 9. Organizational relationships.

will provide the operating Civilian Personnel Office function. NAD will provide computer support for processing COEMIS in addition to its normal management functions. Baltimore District, through its home office and a field office at Cameron Station, will provide the financial management, supply, and procurement functions. On-site USAEA,CA M&R personnel will be managed by the resident Real Property Maintenance Manager (RPMM). The RPMM is the organization's primary point of contact with the installation served represented by the Staff Engineer (SE). The SE, working within his own command chain, is responsible for accomplishing all RPMA through the RPMM. Several of the staff functions were performed by MDW offices during the start-up period to provide time for orderly development of the USAEA,CA support functions. Figure 10 shows this relationship. The Director, USAEA,CA, will also serve as the MDW Staff Engineer.

Figure 11 shows the general approach taken to develop the required organizational structure and authorization documents. Appendix B provides a detailed CPM chart of the task.

A conceptual organizational chart was developed which served as the basis for the initial Functional Statement and the identification of key positions for which recruitment actions had to be initiated. Based on preliminary workload data and the current Staffing Guide, a draft Table of Distribution and Allowances (TDA) was developed. The TDA supporting documentation was revised several times as the organizational concept was refined; input was received from reviewing authorities before it was accepted as meeting all organizational goals. When the Phase Ia documentation was essentially complete, the team developed preliminary modifications to the TDA to reflect the increase in workload as Phases Ib, II, and III installations are consolidated into USAEA,CA. These changes reflect removing organizational functions from the existing FE organization and increasing the capabilities in USAEA,CA Headquarters and other support organizations to cover the predicted workload. The process was simplified by the assumptions that the on-site workforce will remain unchanged, and that functional changes will be limited to the management and supervisory functions. Figures 12 through 18 show the resulting reorganization structure.

Functional Statement

The mission of the USAEA,CA is "to centrally manage the execution of real property maintenance activities at designated installations in the Capital Area." The Functional Statement was approved for distribution on 16 June 1980 and is given in Volume III of this report. While many of the functions are parallel to other organizations, the IPC addressed two new functional areas in detail: the Real Property Maintenance Manager (RPMM) and the Staff Engineer (SE) organizational functions. The Staff Engineer function is not part of the USAEA,CA. However, since the installation FE's responsibilities were to be divided between the RPMM and the SE, both portions had to be defined to ensure comprehensive coverage of all responsibilities and establish good communications.

In the initial concept, the RPMM was considered to be the on-site supervisor responsible for managing the shop personnel and for providing USAEA,CA representation. Over time, as the organization became better defined and

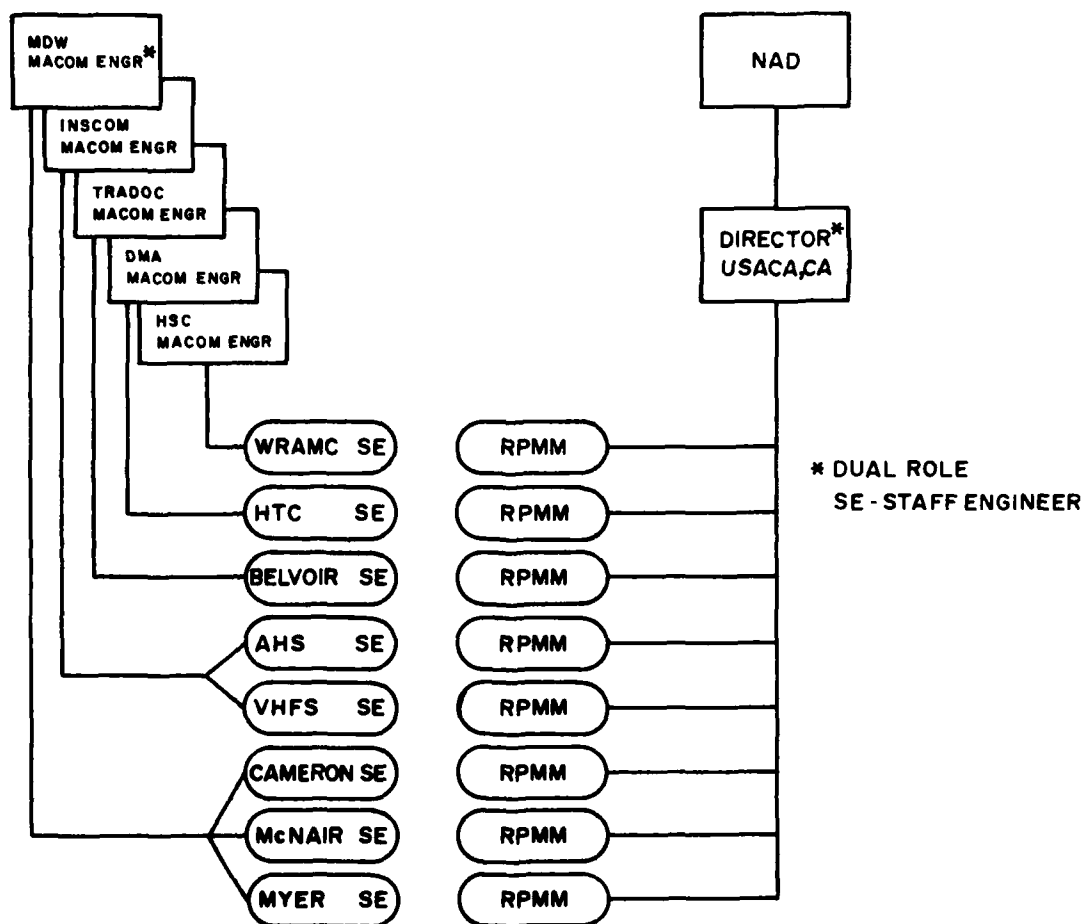


Figure 10. Staff Engineer/RPMM relationships.

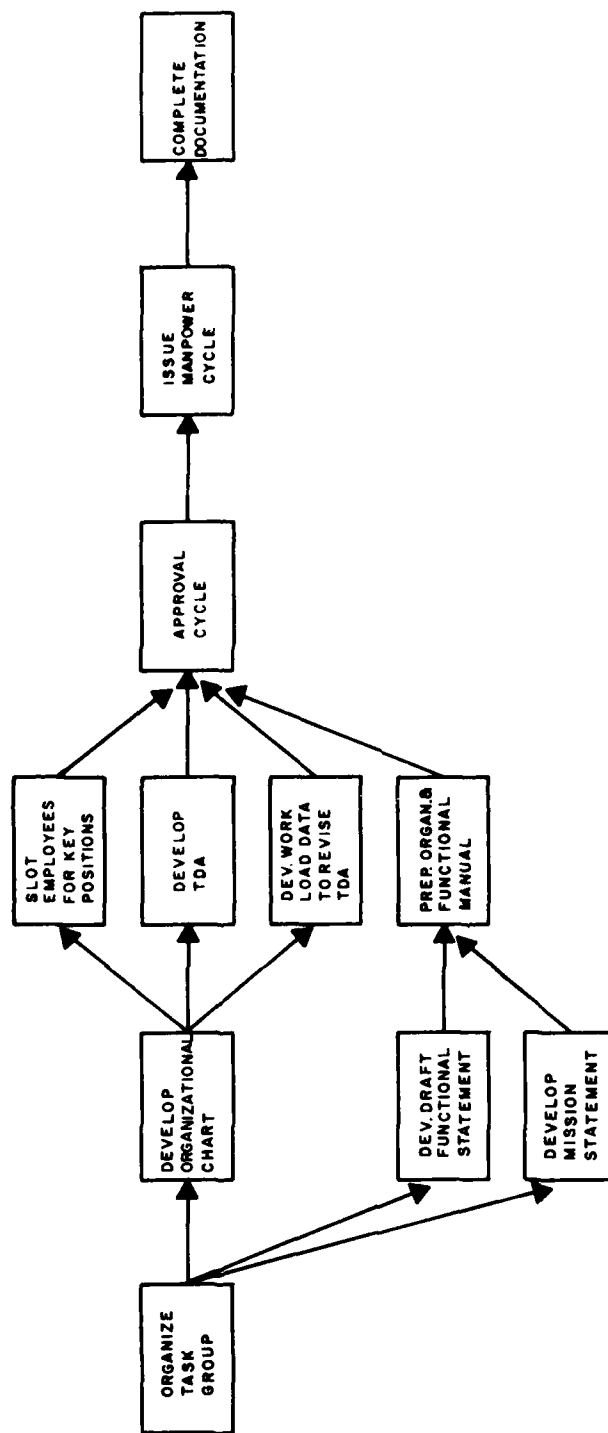


Figure 11. Organization development.

**USA ENGINEER ACTIVITY, CAPITAL AREA
(USAEA, CA)**

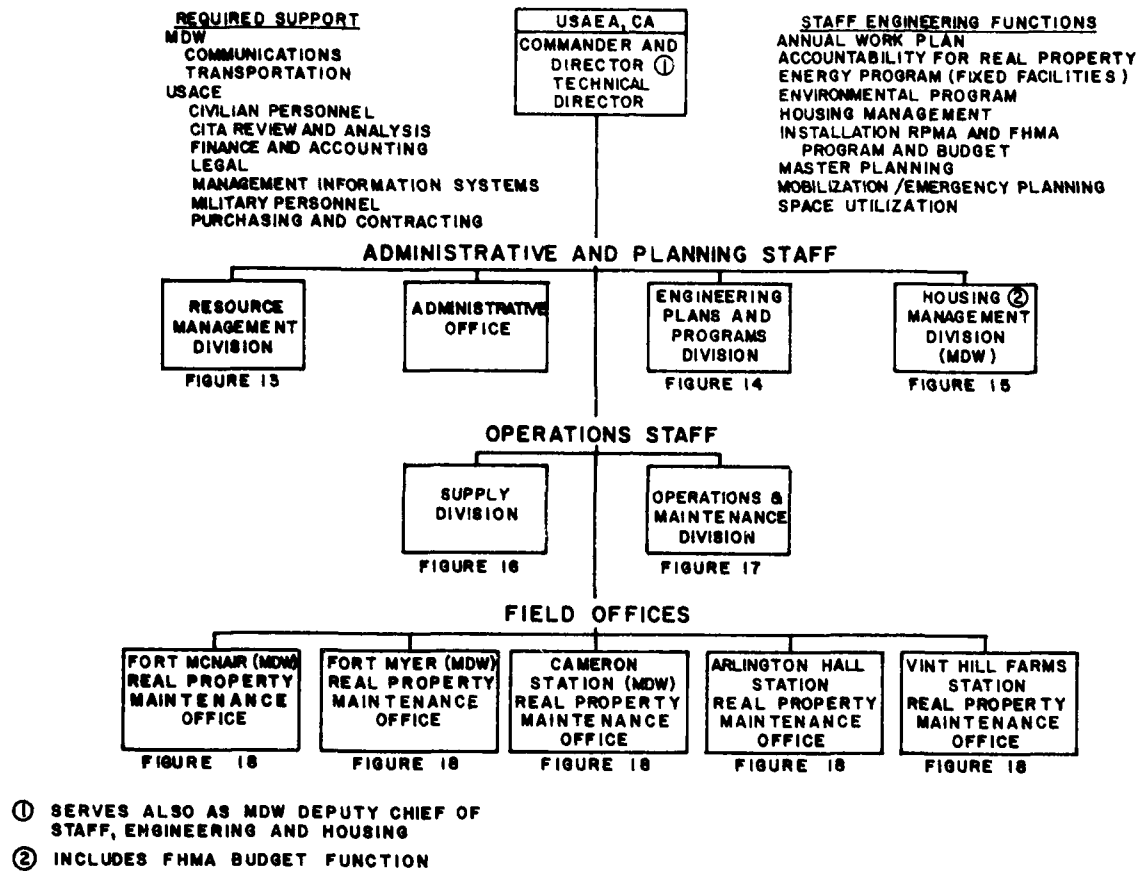


Figure 12. USA Engineer Activity, Capital Area.

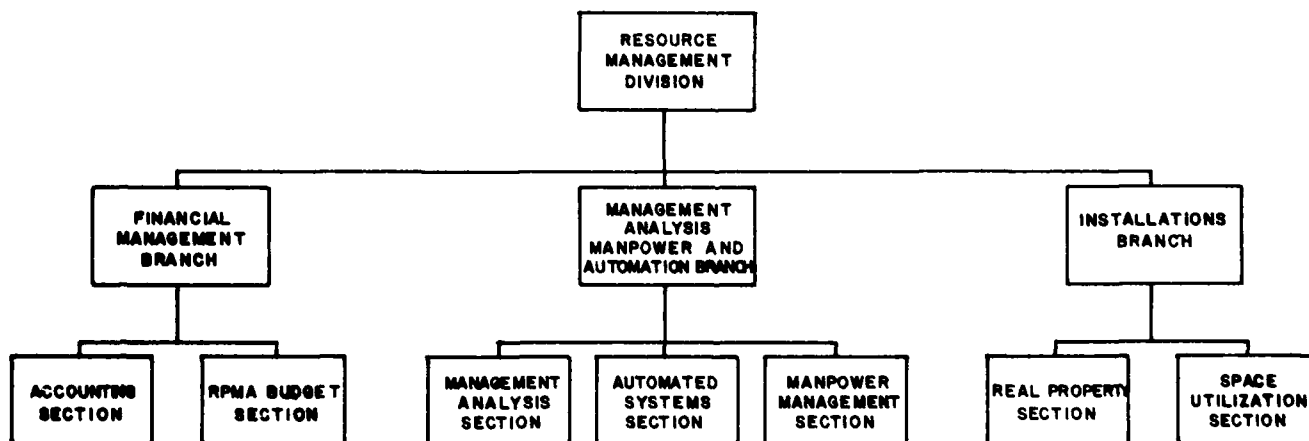


Figure 13. Resource Management Division.

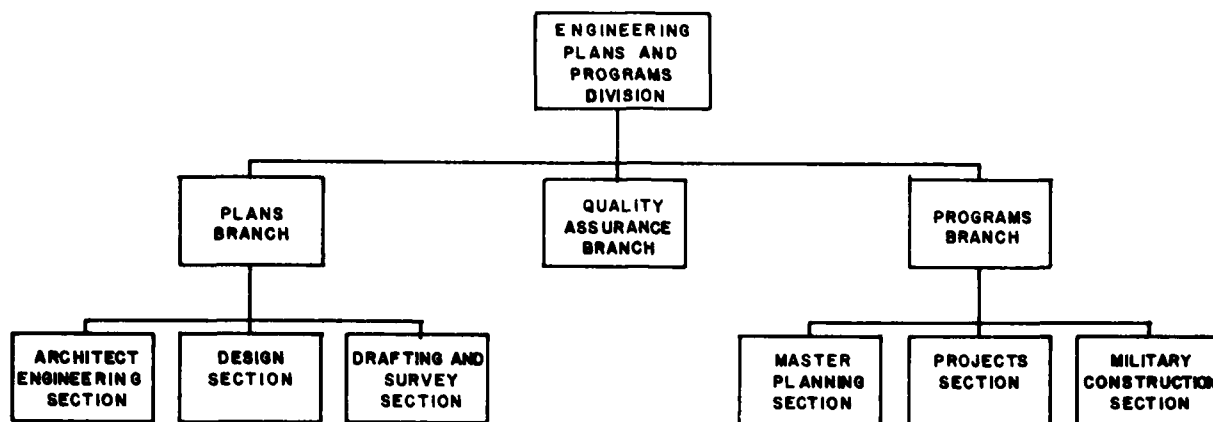


Figure 14. Engineering Plans and Programs Division.

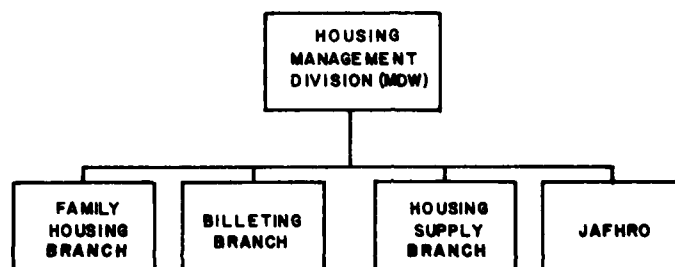


Figure 15. Housing Management Division (MDW).

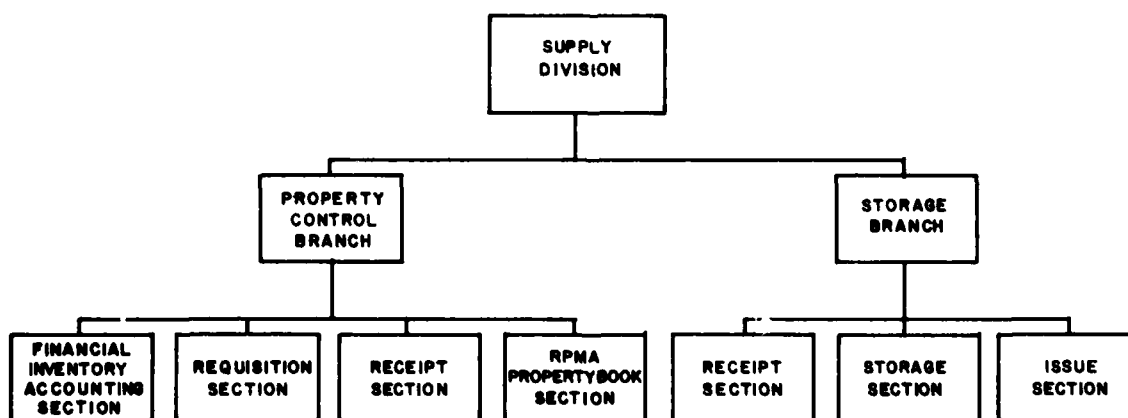


Figure 16. Supply Division.

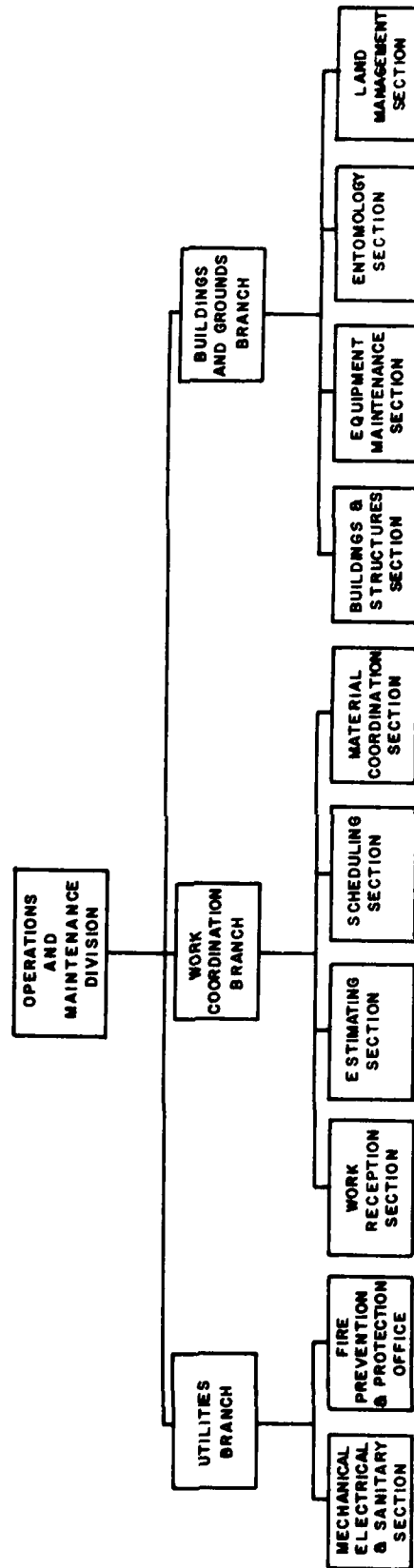


Figure 17. Operations and Maintenance Division.

draft papers were reviewed by other organizations, the role of the RPMM increased. In the final Functional Statement, the RPMM retained several FE functions (e.g., advisory member on the Installation Planning Board, Fire Marshal on non-MDW installations, support for the Self-Help Program, directing on-site USAEA,CA operations, and principal USAEA,CA contact with Staff Engineer). The primary flow of reimbursable work orders is from the SE through the RPMM to the USAEA,CA, and then back to the RPMM for execution.

TDA Development

The preconsolidation MDW facility engineering organization contained 428 spaces, of which 125 were in headquarters, DCSEH. Figure 19 gives the distribution of spaces. For reference, Figures 20 through 23 give the space allocations for the other installations.

An organization concept for the USAEA,CA was developed that could effectively manage Phase Ia consolidation then expand as other installations were added. Using the MDW workload analysis, a proposed TDA was developed using the Staffing Guide. The follow-on phase requirements were then analyzed. The proposed TDA served as the basis for the development of the Functional Statement and job descriptions for key positions. Defining the functions and working relationship of the Staff Engineer and Real Property Maintenance Managers had a major impact on development of the TDA.

The TDA was based on the workload analysis and the Staffing Guide,¹⁴ using a set of yardstick computations for deriving the final quantities. Appendix E gives the yardstick computations used to derive the final TDA. The TDA contains a total of 616 spaces, of which 365 are for the RPMM organizations at the three MDW installations, 65 are for the MDW Staff Engineering organization, and 186 are for the USAEA,CA Headquarters. To assure effective coordination with tenant organizations, there are 51 new positions in the Headquarters, as compared to the preconsolidation MDW FE organization. Figure 24 gives a breakdown of the new positions. This organization provides an overall supervisory ratio of about 1:5.5. Figure 25 compares the USAEA,CA and the MDW Staff Engineer staffing by function. One criterion for developing the USAEA,CA TDA was that it had to accept all of the on-board FTP workforce in positions identified as supporting FE activities. To ensure that this criterion was achieved on an individual basis, a computer program was developed to cross-reference MDW personnel with USAEA,CA TDA positions. This effort of placing all on-board personnel was successful. Figure 26 traces the flow of MDW personnel spaces into the USAEA,CA organization. As a side benefit, the cross-reference listing was used to identify incoming personnel so that they could be considered in establishing the new organization and provide guidance to the IPG when needed.

Estimates for support functions are based on DA PAM 510-551 factors for the marginal add-on of the workload of USAEA,CA. Thus, only additional direct labor is calculated. Estimates for support services are based on the factors

¹⁴Staffing Guide for U.S. Army Garrisons, Department of the Army Pamphlet (DA PAM) 510-551 (Headquarters [HQ], Department of the Army [DA], January 1972).

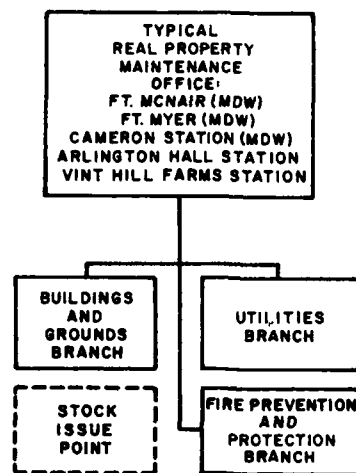


Figure 18. Typical Real Property Maintenance Office.

<u>DIVISION</u>	<u>OFF</u>	<u>EM</u>	<u>GS</u>	<u>WB</u>	<u>TOTAL</u>
OFC, DEH	2	1	1		4
PROG & PLANS			23		23
ENGR MGMT			13	3	16
ADM & BUDGET		1	12		13
HSNG	1	6	32	3	42
WORK MGMT	<u>1</u>	<u>1</u>	<u>10</u>	<u>16</u>	<u>27</u>
SUBTOTAL	3	9	91	22	125
<u>FE ACTIVITY</u>					
FORT MYER	2	3	28	127	160
FORT MCNAIR	1	2	2	57	62
CAMERON STATION	<u>1</u>	<u>1</u>	<u>2</u>	<u>77</u>	<u>81</u>
SUBTOTAL	4	6	32	261	303
GRAND TOTAL	7	15	123	283	428

Figure 19. Space distribution--MDW.

<u>ACTIVITY</u>	<u>OFF</u>	<u>EM</u>	<u>GS</u>	<u>WB</u>	<u>TOTAL</u>
ADMIN			4		4
ENGR MGMT			9	4	13
ENGR PLANS & SVCS	1		7		8
HSNG MGMT	1	2	4		7
SUPPLY	—	—	5	4	9
SUBTOTAL	2	2	29	8	41
OFC, FE	1		2		3
FIRE PREV, PROT			20		20
TRADES & CRAFTS	—	—	—	141	141
SUBTOTAL	1	—	22	141	164
GRAND TOTAL	3	2	51	149	205

Figure 20. Space distribution--INSCOM.

<u>ACTIVITY</u>	<u>OFF</u>	<u>EM</u>	<u>GS</u>	<u>WB</u>	<u>TOTAL</u>
SAFETY			2		2
ENGR MGMT			1	5	6
ENGR PLANS & SVCS			7		7
SUPPLY	—	—	2	—	2
SUBTOTAL			12	5	17
OFC, FE			3		3
FIRE PREV			1		1
TRADES & CRAFTS	—	—	1	118	119
SUBTOTAL	—	—	5	118	123
GRAND TOTAL			17	123	140

Figure 21. Space distribution--DMAHTC.

<u>ACTIVITY</u>	<u>OFF</u>	<u>EM</u>	<u>GS</u>	<u>WB</u>	<u>TOTAL</u>
ADMIN	2		9		11
ENGR PLANS & SVCS			16	1	17
RESOURCE MGMT			9	8	17
STORAGE AND SUPPLY			6	1	7
FIRE PREVENTION			24		24
TRADES AND CRAFTS			4	218	222
	—	—	—	—	—
GRAND TOTAL	2	0	68	228	298

Figure 22. Space distribution--WRAMC.

<u>ACTIVITY</u>	<u>OFF</u>	<u>EM</u>	<u>GS</u>	<u>WB</u>	<u>TOTAL</u>
ADMIN	2	1	8		11
ENGR PLANS AND SVC			13		13
CONST INSPECTION			6		6
RESOURCE MGMT			10	7	17
STORAGE AND SUPPLY			7	7	14
FIRE PREVENTION AND PROTECTION			35		35
HOUSING			17	5	22
TRADES AND CRAFTS			3	195	198
	—	—	—	—	—
GRAND TOTAL	2	1	99	214	316

Figure 23. Space distribution--Ft. Belvoir (manpower listing 21 Sep 81).

A. Development of the USAEA,CA organization to fully meet its mission responsibilities required staffing that could perform most necessary functions with minimal support from other organizations. Several new positions were added to the on-going FE (MDW) organization to achieve this status.

B. New Positions

1. Engineering Plans and Programs Branch (Workload Justified)	14
2. Shop Personnel (Fort Myer) (Workload Justified)	12
3. O&M Division (a new Chief, a Clerk-Typist, an Agronomist, and a Motor Officer)	4
4. On-going OPC (four Management Analysts to complete phases II and III of the NCR-RPMA action)	4
5. Automated Systems (a new organization to perform ADP activities for USAEA,CA)	6
6. Procurement Assistant (District liaison)	1
7. CITA Coordinator (District liaison)	1
8. Technical Director (Commander's Office)	1
9. Assistant Staff Engineer	1
10. Driver (Admin)(Mil E4)	1
11. Accounting/Budgeting (Rev. Fund Act.)	3
12. Quality Assurance Branch Supervisor (Consolidated Inspection)	1
13. Program Analyst (Budget)	1
14. Word Processing Supervisor	1

C. In addition to the 39 new positions added to USAEA,CA in the regional management activities and 12 new positions justified by new workload at Fort Myer in the shops, there was a decrease or transfer of 65 spaces from the field stations (Cameron Station, Fort McNair, and Fort Myer).

D. Major Spaces Transferred From Field

1. Work coordination activities transferred from field to headquarters	27
2. Pest control activities transferred from field to headquarters	6
3. Buildings and Grounds and Utilities activities transferred from field to headquarters	6
4. From custodial activities to contract (Cameron Station)	19
5. From custodial activities to contract (Fort McNair)	14

E. An additional major transfer of spaces included the transfer of supply spaces from MDW to USAEA,CA 28

Figure 24. TDA new positions for USAEA,CA.

<u>USAEA, CA</u>	<u>USAEA, CA Functions</u>	<u>MDW Staff Engineer Functions</u>
Office of the Director	5.0	2.0
Special Assistants:		
Equal Employment Officer	1.0	0.0
Public Affairs Officer	1.0	0.0
CITA Coordinator	1.0	0.0
Security Officer	1.0	0.0
Safety Officer	1.0	0.0
Energy Coordinator	0.0	1.0
Environmental Coordinator	0.0	1.0
Administrative Office	17.0	1.0
Engineering Plans and Programs Division	3.0	0.0
Plans Branch	31.0	0.0
Programs Branch	0.0	6.0
Quality Assurance Branch	15.0	0.0
Housing Management Division	0.0	7.0
Billeting Branch	0.0	7.0
Family Housing Branch	0.0	7.0
Housing Supply Branch	0.0	9.0
JAFHRO	0.0	14.0
Operations and Maintenance Division	2.0	0.0
Buildings and Grounds Branch	11.0	0.0
Utilities Branch	6.0	0.0
Work Coordination Branch	27.0	0.0
Resource Management Division	3.0	0.0
Financial Management Branch	9.0	5.0
Installations Branch	3.0	3.0
Management Analysis Branch	22.0	2.0
Supply Division	3.0	0.0
Property Control Branch	11.0	0.0
Storage Branch	14.0	0.0
Cameron Station	94.0	0.0
Fort McNair Station	78.0	0.0
Fort Myer Station	<u>193.0</u>	<u>0.0</u>
Totals	<u>550.0</u>	<u>65.0</u>
Grand Total		616.0

Date: 12 May 1980

Figure 25. USAEA, CA and MDW Staff Engineer functional distributions.

developed in coordination with the installation. It was estimated that total organization support for the consolidated USAEA,CA would be 101 positions. USAEA,CA needs 60 of these positions for accounting and procurement support from the supporting District. Figure 27 shows the total spaces for other support services provided by the installations.

Preliminary TDAs were developed for the organization after consolidating functions at the remainder of the installations. Summation of the TDAs is given in Figure 28. The MDW Staff Engineer function is combined with the USAEA,CA Director in a dual assignment. In all other cases, the Staff Engineer functions are to be retained by the Post Commanders and will interface with the RPMM's.

As Phase Ia neared completion, workload data for Phase Ib and II installations were collected. The Fort Belvoir workload (Figure 29) was analyzed to help define the Staff Engineer function. The analysis will be updated in the future before determining the personnel impact of consolidating the organization into the USAEA,CA.

There was no agreement on where the budget function for the Housing Management Division should be located. The function could be performed as part of the Financial Management Branch of the Resource Management Division, or as part of the Housing Management Division, as proposed by the IPG. OCE accepted the proposed location, subject to reconsideration after further study and analysis.

Support Organizations

The USAEA,CA will draw the following support from other organizations:

Procurement, legal, commercial activities, and accounting from the Baltimore District Office

Personnel from OCE

Transportation and communication services from MDW

ADP services from USAMSSA

The decision to assign personnel servicing responsibilities to the USACE Operating Civilian Personnel Office (OCPO) is subject to reconsideration. The CPO function could be assigned at a later date to the Baltimore District Office or to the North Atlantic Division Office.

Personnel Activities

Personnel activities were handled in two phases. In the first phase, a personnel specialist developed the key position job descriptions and prepared documentation needed to classify those positions. In the second phase, the USACE OCPO planned and executed all activities needed to transfer existing MDW employees into the USAEA,CA, and to fill identified vacancies through recruitment actions.

SPACE TRANSFERS

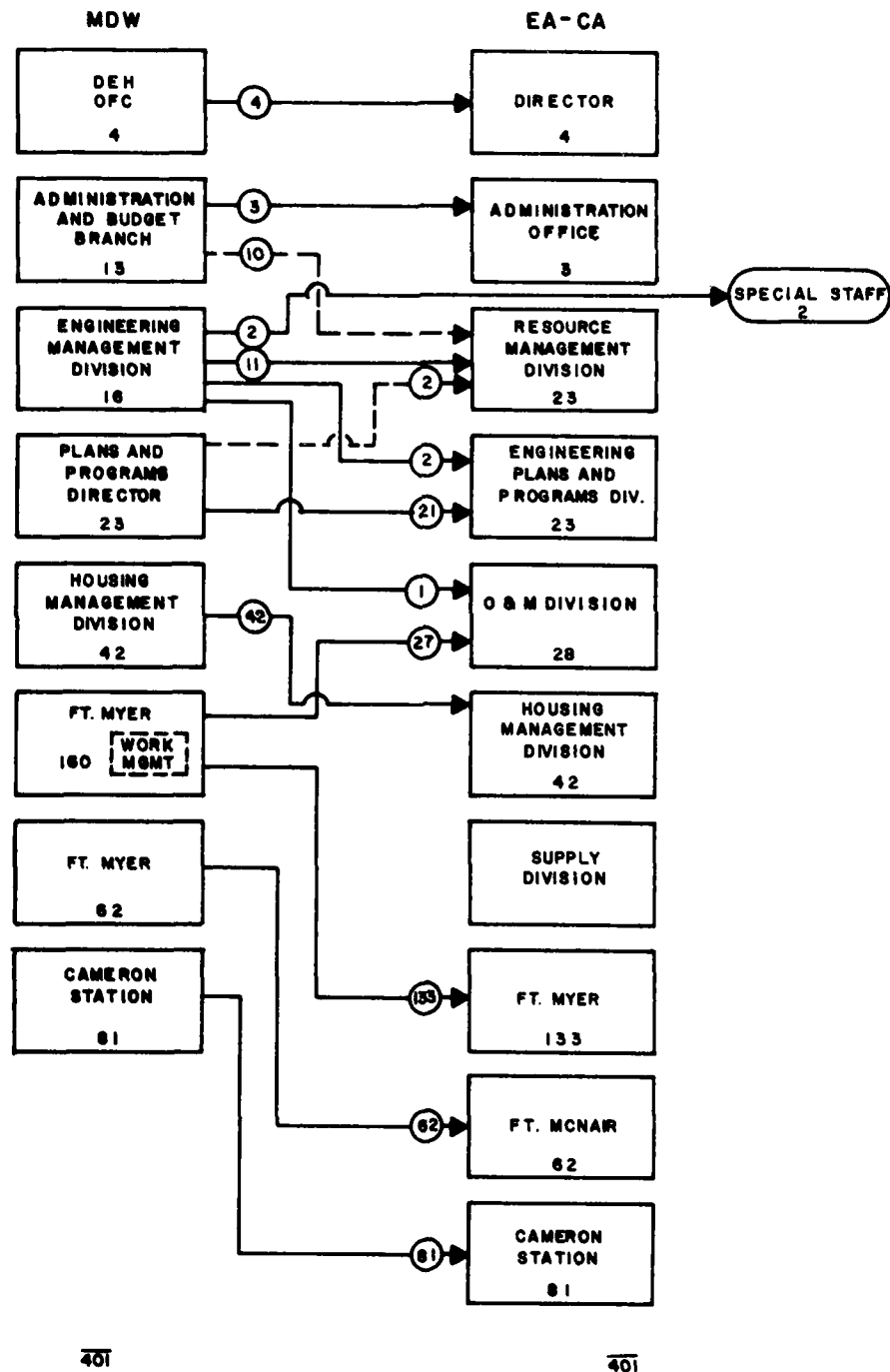


Figure 26. Space transfers.

External Support Services
(Estimated)

	<u>MDW</u>	<u>Vint Hill Farms</u>	<u>Arlington Hall</u>	<u>HTC</u>	<u>Fort Belvoir</u>	<u>WRAMC</u>
Equivalent Full-Time Employees	23.9	10.1	5.66	10.3	26.06	10.9

Figure 27. Support personnel in support of FE.

1 OCT 80

<u>ACTIVITY</u>	<u>MDW</u> EA,CA Ph Ia FY 81	<u>VHFS</u> AHS Ph Ib FY 81	<u>TOTAL</u> PHASE I FY 81	<u>FORT</u> BELVOIR Ph II FY 83	<u>TOTAL</u> PHASE II FY 83	<u>WRAMC</u> Ph IIIa FY 84	<u>DMAHTC</u> Ph IIIb FY 84
A. USAEA,CA							
1. <u>Staff</u>							
Req.	180	11	191	41	232	22	6
Auth.	139	9	148	35	183	16	6
2. <u>Field</u>							
Req.	371	200	571	376	947	357	112
Auth.	292	168	460	243	703	260	112
3. <u>Totals</u>							
Req.	551	211	762	417	1179	379	118
Auth.	431	177	608	278	886	276	118
B. Staff Engineer							
1. <u>Staff (ISE)</u>							
Req.	21	16	37	12	49	12	8
Auth.	14	16	30	12	42	12	8
2. <u>Housing</u>							
Req.	44	8	52	28	80	0	0
Auth.	42	7	49	26	75	0	0
3. <u>Totals</u>							
Req.	65*	24	89	40	129	12	8
Auth.	56*	23	79	38	117	12	8
C. Other							
Req.	0+	8	8	53	61	54	4
Auth.	0	2	2	33	35	36	4
D. Current DTAs							
Req.	616	243	859	510	1369	445	130
Auth.	487	202	689	349	1038	324	130
E. RPMA Manager (included in above totals)							
	23	12	35	8	43	7	8
	21	12	33	8	41	7	8

*Dual hat-add to staff totals.

Figure 28. USAEA,CA TDA consolidation by phases.

<u>Items</u>	<u>Units</u>	<u>Count</u>
1. Installation strength (total)	Thousands	2893
a. Requirements	Thousands	Not available
b. Authorized	Thousands	3.9
2. Facility Engineer strength	Thousands	0.51 Required
3. Military population served	Thousands	6.1
4. Civilian population served	Thousands	9.6
5. Supply Division strength	Units	19*
a. Property control	Units	6
b. Storage	Units	13
c. Related units	Units	--
6. Average monthly line items (supply)	Thousands	8.1
a. Sales	Units	5000
b. Requisitions (NICP)	Units	100
c. Receipts	Units	1000
d. Procurement	Units	1000
e. Property book	Units	1000
f. Register	Units	--
g. Work order request (RX2)	Units	--
7. Number of annexes (supply)	Units	--
8. Procurement actions (total)	Units	4000/month
9. Land area	Acres	9239
10. Sewers	Linear feet	445,683
11. Paved area (improved surfaces)	Square feet	32,616,000
12. Family housing	Dwelling units	1655 + 444**
13. Bachelor housing	Men	4905
14. Number of buildings	Units	1432 + 144
15. Building area	Square feet	8,611,000 + 454,024
16. Buildings (value) (cost to gov't, not replacement)	Million dollars	142.9
17. Engineering workload (total)	Million dollars	42.2
a. Annual cost of in-house design projects	Million dollars	(11.3)
b. Annual cost of completed projects	Million dollars	(30.9)
18. Annual work authorizations (total)	Thousands	29.5
a. Service orders (12-month period)	Thousands	23.8
b. Job order requests (12-month period, estimated only)	Hundreds	38.2***
c. Individual job orders	Hundreds	18.6
d. Standing operating orders	Hundreds	0.25
e. Average annual manhours on IJOs	Thousands	219.8

*Includes recycle, POL, and keypunch functions (6 positions).

**NOTE: 444 family housing units are under construction; impact is reflected here.

***Number of JORs is artificially suppressed; previous year 8000 JORs were received.

Figure 29. Fort Belvoir workload factors.

The positions covered in the first activity were those needed to support the IPG and ensure that key personnel could participate and influence the outcome of the planning. The following positions were identified; actions to be taken are noted.

<u>Position</u>	<u>Remarks</u>
1. Technical Director	Recruit
2. Ch, Resource Mgmt Div.	T.O.F.
3. Ch, Financial Mgmt Br.	T.O.F.
4. Ch, Mgmt Anal, MPR, Auto Br.	Recruit
5. Ch, Instal. Br.	Recruit
6. Ch, Adm. Ofc.	Recruit
7. Ch, Engr. P & P Div.	T.O.F.
8. Ch, Plans Br.	T.O.F.
9. Ch, Q.A. Br.	Recruit
10. Ch, Pgms. Br.	T.O.F.
11. Ch, Hsng. Mgmt. Div.	T.O.F.
12. Ch, Family Hsng. Br.	T.O.F.
13. Ch, Billeting Br.	Military
14. Ch, Hsng. Supply Br.	T.O.F.
15. Ch, JAFRO	T.O.F.
16. Ch, Supply Div.	Recruit From DCSLOG Space
17. Ch, Property Control Br.	Recruit From DCSLOG Space
18. Ch, Storage Br.	Recruit From DCSLOG Space
19. Ch, O&M Div.	Military
20. Ch, Utilities Br.	Recruit
21. Ch, Work Coord. Br.	T.O.F.
22. Ch, B & G Br.	T.O.F.
23. RPMA, Cameron Sta.	Military
24. RPMA, Fort McNair	Military
25. RPMA, Fort Myer	Military

The initial emphasis was placed on recruiting for positions 1, 4, and 19. The job descriptions (see Volume IV) were prepared, making reference to the draft documentation available at that time.

The second phase of the personnel work was accomplished by the USACE OCPO over a very short period. The need for the activity had long been recognized, but no definite responsibilities had been assigned to any organization until late in the IPG period. Even with schedule compression techniques, the USACE OCPO was unable to complete all personnel actions by the activation date. Local agreements were made with some of the losing organizations to treat their employees as if the TOF were not in effect and continue to provide office space, etc., to them until the transactions could be completed. This approach successfully supported the planned activation of the USAEA,CA. The USACE OCPO provided a list of events which must be completed in any future transfer of an organizational function and a list of realistic lead times. The CPM provided in Appendix B illustrates this more realistic schedule.

A total of 443 personnel authorizations were transferred into the USAEA,CA from the existing organizations. Transfers were tracked by organization and by individual name. Certain personnel, scheduled to be transferred into the USAEA,CA were contacted during the IPG period to participate in the

planning or to evaluate the work being done by others. The impact of the transfers was minimal. In most cases, craftsmen and overhead personnel continued to perform their usual work with no change except the name of the organization.

Coordination With SARPMA

IPG members visited the San Antonio Real Property Maintenance Agency (SARPMA) Headquarters, Fort Sam Houston, TX, on 3-5 March 1980 to become familiar with an operating consolidated system. SARPMA is an organization directed by the Air Force that is responsible for RPMA at the following installations plus 22 Army Reserve Centers:

Brooks AFB
Kelly AFB
Lackland AFB
Randolph AFB
Fort Sam Houston

Camp Bullis
Camp Stanley
Seguin AF Auxiliary Field
San Antonio Air Force Station
Canyon Lake Recreational Area

A team was formed during January 1977 to develop SARPMA. Team members were generally individuals who would hold the key positions in the new organization. SARPMA was activated on 1 October 1978 as an industrially funded operation. The following problems were found in the management configuration.

1. Interaction with SARPMA is through the Post/Base Facilities Engineer or through the tenant representative. Tenants must send all requests for services through the FE to get assignment of proper Accounting Processing Codes (APCs) for reporting purposes.

2. Cost estimates were generally low and required two or three adjustments per work/job order. It appeared that the effort being invested to determine true costs of operations and justify them to their customers was inadequate.

3. The SARPMA workforce appeared to lack the flexibility envisioned for the USAEA,CA. There were work stoppages due to lack of funds, which resulted in reductions in force (RIFs) when there were too many skilled laborers. Part of this instability was caused by the frequent adjustment of cost estimates and the apparent reluctance to float labor among sites.

4. The SARPMA Plans and Analysis Branch was responsible for distributing utilities costs to tenants on a reasonable basis--a labor-intensive method.

5. Reimbursable orders were being overrun, and funds were running out prematurely.

Master Planning

The USAEA,CA role in master planning was defined for both MDW and non-MDW installations using a process flow charting technique. Appendix F gives a detailed discussion of the master planning process. This process was used in

several areas and provided an ideal vehicle to explain the intent/understanding of the master planning and to achieve full coordination.

Computer Support

The need for computer support to the decentralized USAEA,CA organization was recognized early in the planning phase. The computer support, a network interconnecting all installations to the USAEA,CA headquarters, must facilitate the transfer of data needed to manage RPMA at all locations, with particular emphasis on data needed to recover cost from customers. The requirements will be partially met by using the Corps of Engineers Management Information System (COEMIS), the Integrated Facilities System (IFS), and the Facilities Engineering Supply System (FESS). COEMIS is the work management and accounting system used by Districts and Divisions and will be used for customer billing by USAEA,CA. COEMIS is currently operating on Honeywell computers of the Division office. Baltimore District will access the NAD computers by remote job entry terminals to perform the financial management functions. IFS and FESS are systems which support installation facilities engineers. The use of IFS, COEMIS, and the new interface program are discussed in Chapter 5. FESS was installed to support the central supply function. Since no other software was available to support the other management functions, a long-range effort was initiated to develop the needed software. The first three programs were:

WONDERS--A system for tracking work orders.

SOLVES--A Service Order tracking system.

LEAD-GOLD--A system for remote entry of labor and equipment data.

A computer-based telecommunication network will be developed as more installations are consolidated into the USAEA,CA. The proposed network is shown in Figure 30. The headquarters data entry function includes workstations for both work reception and the system operator. The main warehouse has workstations serving the material coordinator, property control, storage, and supply points. Each installation will have several workstations corresponding to those in the headquarters functions.

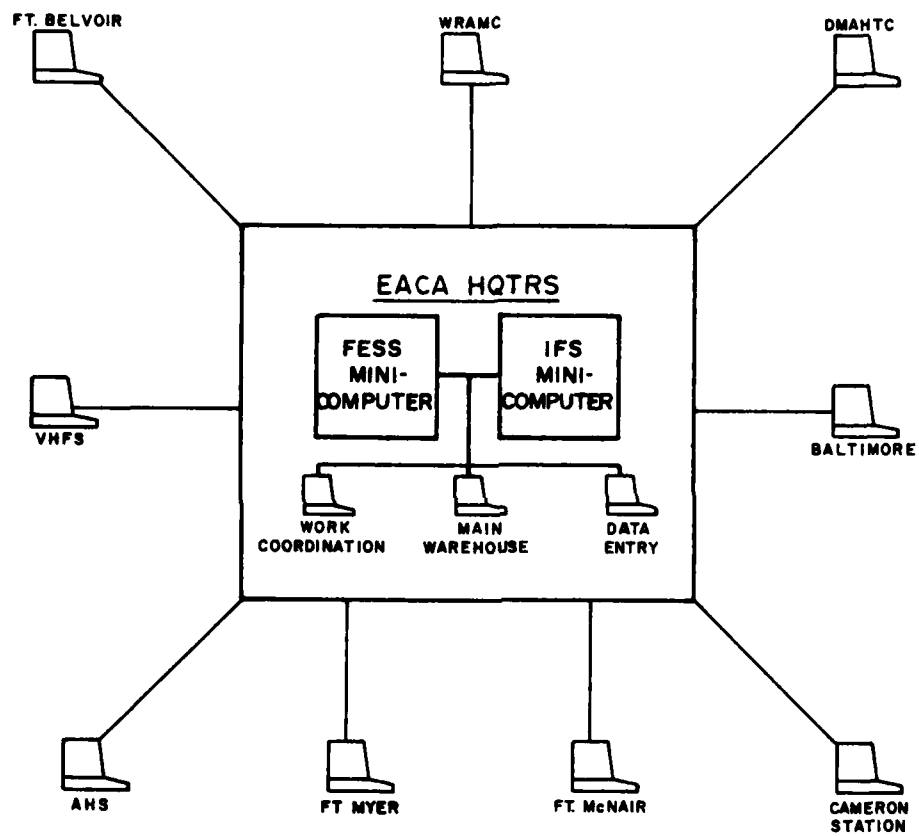


Figure 30. USAEA,CA computer network.

5 FINANCIAL MANAGEMENT

Task

The mission of the Financial Management Task Group was to "develop a detailed financial management plan to include establishment of a revolving fund for reimbursement."

Concept

The USAEA,CA will be funded totally on a reimbursable basis, with monies programmed and provided by the installations and tenants served. A revolving fund will be established for financing activities until an adequate flow of funds can be established. The existing FE Job Cost Accounting System (JCAS), a component of the Integrated Facilities System (IFS), will be used to accumulate job costs.

Financial management, including accounting, disbursing, billing, reporting, and related activities, will be provided by the Baltimore District, and transactions will be reported through the Corps of Engineers Management Information System (COEMIS), along with reports on the District's other accounts. The FE data must be recorded in the IFS so that USAEA,CA financial data will be automatically reflected in both IFS and COEMIS. An automated interface between the two systems must be provided.

The management system depends on having the IFS on each installation operating within an acceptable level of accuracy. Changes will be made in operations to improve the accuracy of data to an acceptable level.

An overhead rate must be added to the current shop costs to cover the costs of USAEA,CA activities and the replacement of installation "free" support services.

RPMA services will be funded by one of the following documents:

1. Quarterly reimbursable order (2544) for Service Order (SO) and Standing Operating Orders (SOO).
2. Periodic reimbursable order for purchasing utilities.
3. Reimbursable orders (2544) for equipment and services obtained by contract.
4. Individual JOB Orders (IJO).

Approach

The Task Group developed the Financial Management Plan (FMP) as the primary means of coordinating the management concept with all approval authorities and organizations affected by the consolidation. The FMP (see Volume II) is the result of the combined effort of several groups, including personnel involved with implementing the new system.

As the FMP development neared completion, the Task Group began developing standard operating procedures for financial management activities, calculating overhead rates for budget purposes, and examining activities related to making the transition from MDW to USAEA,CA control.

Financial Management Plan

The FMP is graphically shown in Figures 31 and 32 at a conceptual level. Figure C3 of Appendix C gives a flowchart detailing the management plan.

Funding certifications will be done in both the Baltimore District Office and in USAEA,CA. For local contractual services up to \$10,000, the Baltimore District delegated funding certification authority to the USAEA,CA.

Certain costs cannot be reprogrammed on a one-for-one basis. For example, customers must continue to budget and account for funds received while reimbursing USAEA,CA for services received. In turn, USAEA,CA must budget and account for orders received while billing the customers for services, thus increasing budgeting and accounting requirements. There will also be an increase in RPMA costs resulting from one-time startup costs (such as overtime for transfer and conversion of records) and for spaces in addition to those for which funds have been provided in the resource guidance.

Customer billing will be generated from IFS/COEMIS information. All existing job orders were closed out in mid-September; outstanding job orders were disposed of in one of the following ways:

1. For new starts, an Order for Reimbursable Services (DA Form 2544) with sufficient funds must be received, accepted, and entered into IFS before a bill can be processed.
2. During the fourth quarter of FY80, the DCSEH, MDW identified unfinished projects and, with the customers, selected the jobs to be carried over into FY81 using the new USAEA,CA overhead rates. On these projects, the DCSEH, MDW furnished additional information to meet the requirements of the IFS Job Master File. These projects were given new order numbers and processed into IFS before any cost was recorded. Additional orders for services should be furnished to provide the extra funding. During the transition period, outstanding job orders involving contractual services must be handled with care to avoid billing for contractual work obligated and costed in the prior fiscal year. If the contractual services portion of the job order has already been obligated and costed through IFS, this portion of the job may already have been billed to the customer (depending on the month the cost appeared). Contractual services performed from direct funding obligated in FY80 will not be recorded in the IFS/COEMIS interface billing data.
3. Orders for reimbursable services covering jobs for which no cost will be generated during FY80 were returned to the originator for reconsideration and, perhaps, resubmission using the new USAEA,CA rates.

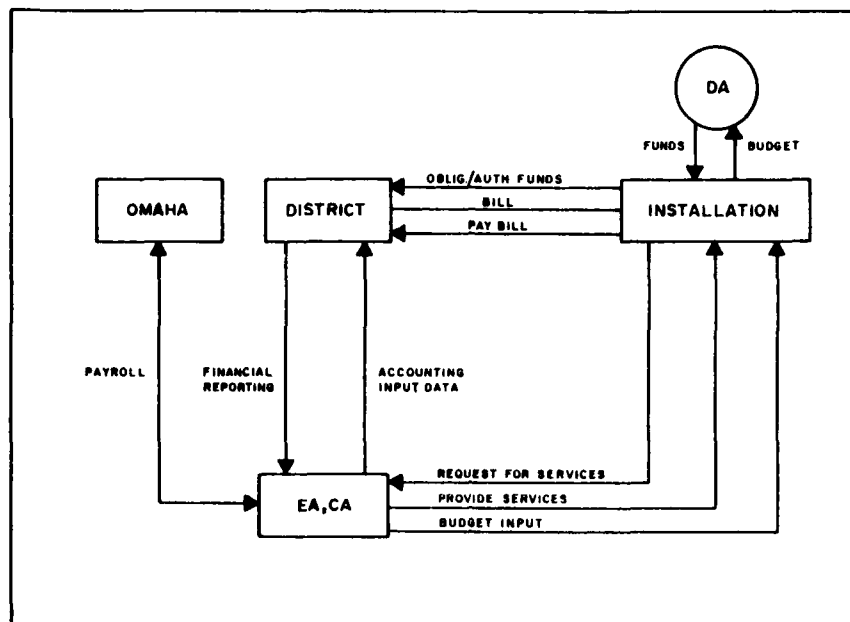


Figure 31. Generalized concept financial management.

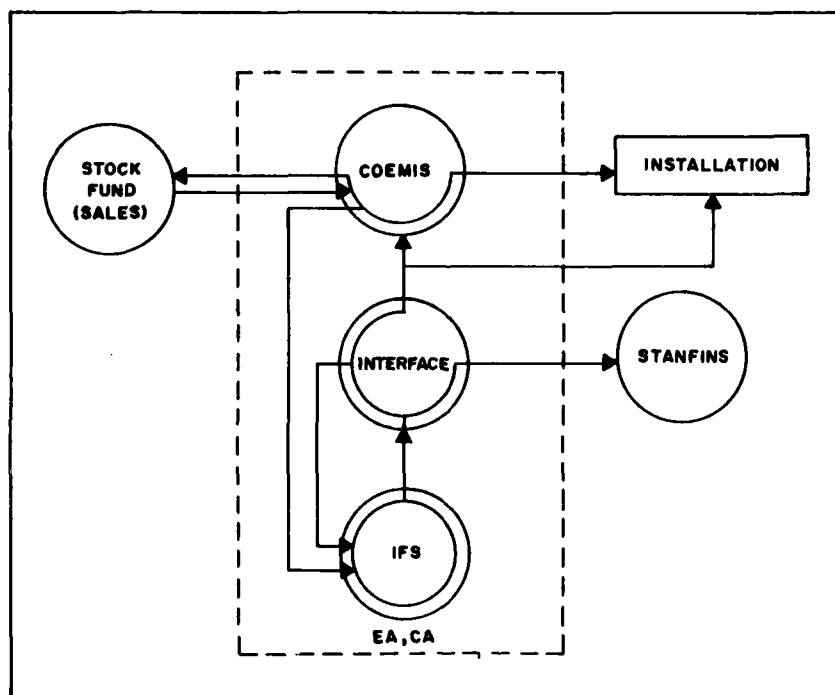


Figure 32. Financial document flow.

4. To simplify the transition, an effort was made to complete all reimbursable job orders before a mid-August cutoff date. When this was not possible, the final bill for FY80 was based on the data compiled from the monthly IFS Reimbursable Cost Report. Sales of utilities to customers were not included in this procedure.

5. A similar process of closing out the books and starting new accounts will be followed as each installation is brought into the consolidation.

Revolving Fund

A study which examined the feasibility of using centralized facility engineering activities recommended the use of a revolving fund to finance the new organization on a reimbursable basis. The Tasking Letter, which established the IPG, contains the same recommendation and requires development of a detailed financial management plan "to include establishment of a revolving fund for reimbursement."

The Civil Works Revolving Fund (CWRF) was selected as the most efficient method for funding USAEA,CA. The CWRF is the only funding technique available that: (1) is readily available, (2) can be handled through the COEMIS system (which also makes other automated systems accessible), (3) is a source of quick financing, (4) has the flexibility to allow assignment of overhead and indirect costs as a percentage of direct costs, (5) provides a technique for handling business-type applications, (6) can be used for clearing accounts, (7) provides the flexibility to control cost by location and element of expense, and (8) provides detailed data needed for planning and budgeting.

Congress established the CWRF to simplify the Corps' accounting procedures and to reflect the true financial conditions of the Civil Works Funds. Public law provides that the fund could be used for "the furnishings of facilities and services for military functions of the Department of the Army and other Government agencies," which suggests broader use for the funds than the current practice of limiting its application to Civil Works. The fund operates from its own resources rather than annual appropriations, and is maintained through reimbursement of funds for services received. The fund was used for initial financing of all USAEA,CA payroll costs and for other expenses that were to be billed to other agencies, projects, and appropriations.

The proposed use of the CWRF was reviewed by three agencies. The OCE Office of Legal Counsel¹⁵ and the DA Office of the General Counsel¹⁶ found no legal basis to object to the use of the fund as proposed by USAEA,CA. However, the Legal Counsel Office noted that prolonged use of the fund after completion of the NCR consolidation test, or its use in other consolidation activities, must be subject to subsequent approval actions.

¹⁵DAEN-CCC Indorsement, 25 April 1980, to ANNCR letter, 28 March 1980, subject: "Use of the USACE Civil Functions' Revolving Funding During Test of Consolidations/Centralized RPMA in NCR."

¹⁶DACS-DMA Indorsement, 10 September 1980, to DACS-DMA letter, 23 July 1980, subject: "Financial Management Plan for the U.S. Army Engineer Activity, Capital Area (USAEA,CA)."

U.S. Army Finance Center personnel strongly suggested that an Operation and Maintenance Activity (O&MA) reimbursable appropriation could be used as a carrier fund to finance the USAEA,CA rather than the CWRP. Using the carrier fund was seen as a technique that would eliminate many of the problems associated with the CWRP while providing the same benefits. It was also suggested that use of the CWRP for funding USAEA,CA may cause manpower reporting problems.¹⁷ Use of the Revolving Fund was also questioned because inventories and assets would not be capitalized during the test, which may eliminate the benefits expected from using the CWRP. The use of an O&MA carrier fund was considered and evaluated by the Task Team, but the concept was rejected because:

1. Use of a carrier account could result in a manually operated system requiring labor-intensive activities to input data into COEMIS and IFS. COEMIS currently has a working module capable of handling Revolving Fund transactions.

2. Using the carrier account approach, indirect costs are separately budgeted from direct costs. Customers would not be billed for all costs (indirect, overhead, and direct). The method for handling overhead appears to further complicate system operations and raise problems related to prorating charges against customers.

Within the CWRP, two accounts will be used to capture USAEA,CA costs. The Shop and Yards Facility Account (VW40) will be used for costs charged directly to RPMA jobs; the Other Facility Account (VW59) will be used for costs of the USAEA,CA administrative and technical staff. Costs related to the USAEA,CA Housing Management Division and the Financial Management Branch Budget Section will be charged to the VW59.2 account and reimbursed from the MDW Family Housing Funds. Operations and maintenance (O&M) of family housing will be charged against the VW40 account like any other RPMA.

ADP Systems

The criteria required that the USAEA,CA financial management system be implemented without changing an existing standard Army ADP system. The success of the USAEA,CA is highly dependent on having IFS operational at all installations and that the systems be operated within an acceptable level of accuracy. This requires having valid and current IFS Job Master Files and Installation Management and Planning Files. The accuracy of the billing and overhead cost data depends directly on having accurate data in the IFS. Not all Phase I installations were on the IFS in January 1980; those with on-line IFS were operating with an unacceptable error rate, and an interface program was needed to allow the flow of data between accounting systems.

To overcome these problems, action was taken to install the IFS at Vint Hill Farms Station, Arlington Hall Station and the DMA HTC. Training for operators and users was scheduled, and FESA made a significant effort to identify probable sources of error and to provide both the management and standard operating procedures needed to reduce the error rate. While these

¹⁷ USAEA,CA Disposition Form, 4 April 1980, subject: "U.S. Army Finance Center A EA,CA Meeting, 31 March - 1 April 1980.

actions are generally unrelated to the consolidation effort, successful operation of the consolidated organization depended on the availability and acceptance of IFS data. The system SOPs were inadequate. One indication of this problem was the significant number of completed work orders still open in the system. FESA developed the needed SOPs for distribution by MDW and helped with the required training. Operational problems included the lack of an IFS Component Inspection baseline evaluation. The RPMA Functional Group Master Files had never been developed, keypunching was decentralized, and errors were being corrected by one organization with participation from the data originator. Corrective activities included providing feedback and training to users and operators and providing SOPs to reinforce the training.

The financial and accounting function for the USAEA,CA will be performed by the Baltimore District using COEMIS to record and report financial data. All data pertaining to the management of Real Property Maintenance Activities are recorded and reported through IFS. Installation Finance and Accounting Offices use STANFINS to record accounting data. To satisfy all three systems, the USAEA,CA needed an automated interfacing system to allow single entry of data. The team defined a conceptual system for the interfacing system. Volumes III and IV give the System Functional Description and System Users Manuals.

The USAFESA/USAEASA developed the IFS/COEMIS Interface System. Figure 33 gives the general flow of activities. The Interface System will periodically extract detailed job cost and civilian labor data from IFS and summarize it to a level that relates to individual customer Intra-Army Orders for Reimbursable Services (e.g., customer orders or DA Form 2544). Based on the actual civilian labor hours used in performing RPMA for a customer, the overhead cost per hour will be added to the number of civilian laborers used to perform the RPMA, and charged to the customer order number. Output from this system will furnish data to COEMIS, STANFINS, and IFS.

The FESA/EASA team developed a system test procedure for evaluating the IFS/COEMIS interface program. To run the test and initialize the system, a number of data tables were needed. The tables were prepared according to the System Development Plan. The test plan required the services of a U.S. Army Management System Support Agency (USAMSSA) system analyst to help with the debugging program; however, USAMSSA was unable to make any of its resources available over a 3-month period. Instead, they proposed to make their files available, and for the USACE analysts to install, run, and debug the program independently.¹⁸ The full system test was not accomplished due to the lack of technical resources, which could have complicated maintaining system accuracy in the future.

Additional system inefficiencies should be expected in implementing the computer system, including:

1. Two major systems are involved and the frequency of downtime periods should be greater than expected in operating a major system.

¹⁸ACAM-SDD-D letter, 11 September 1980, subject: "IFS/COEMIS Interface Support."

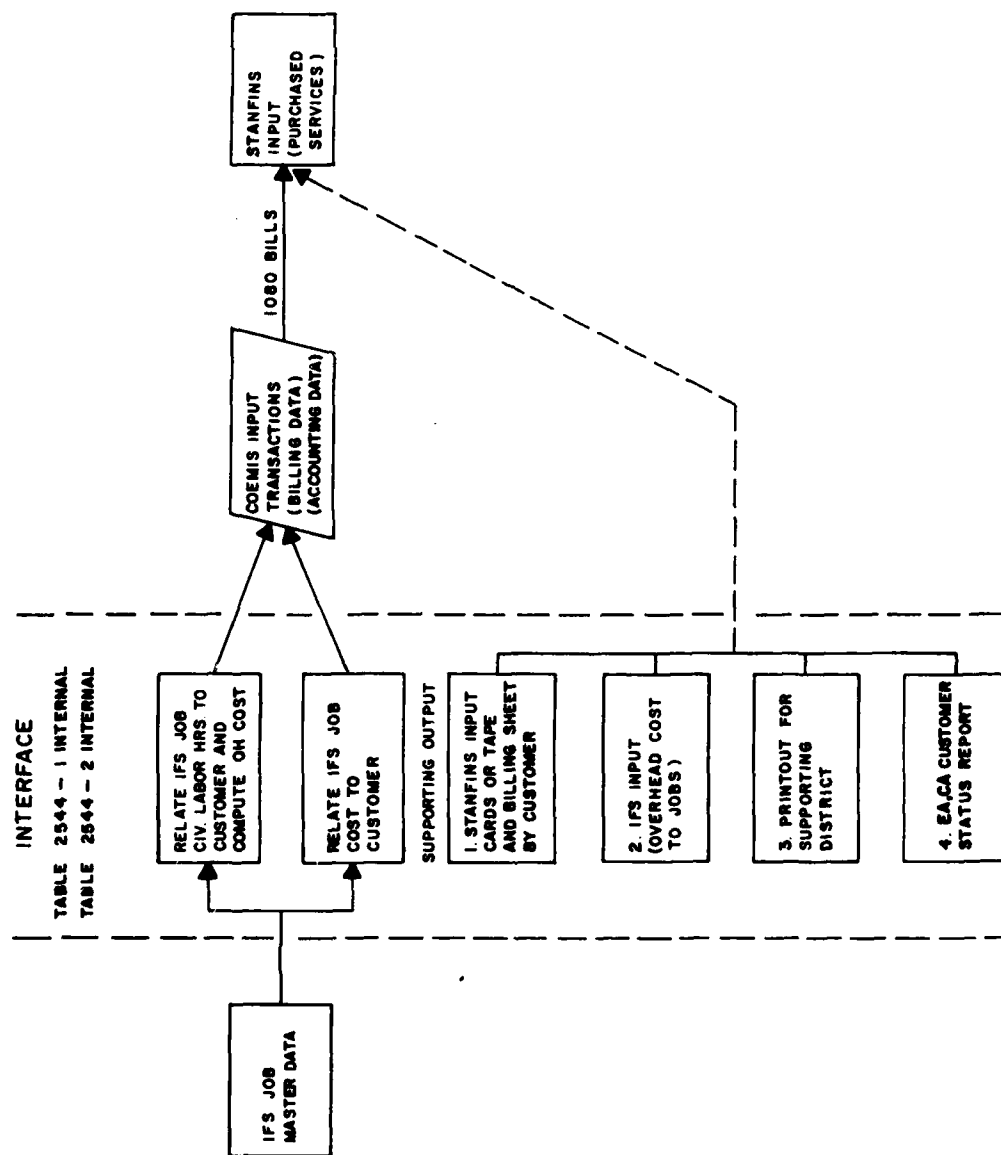


Figure 33. IFS/COEMIS interface general system flow.

2. System testing will involve personnel responsible for the system after consolidation, which will adversely impact the performance of their current duties.

3. Management should expect delays in setting up a new system due to normal learning curve inefficiencies, training of new employees, and filling vacancies.

Output data will be furnished to COEMIS for billing customers and recording Revolving Fund sales. The billing information passed to COEMIS for each customer order number will be based on IFS job costs plus applied overhead cost. The output includes both the automated input transactions to COEMIS and a printout of the information for the supporting District Engineer.

Output data will be furnished to STANFINS for recording the disbursement of the customer funds. This output includes the automated input transactions and a printout of supporting details of the customer bills.

Output data will be furnished back to IFS for posting applied overhead costs to the job records. This output is generated automatically on tape for input to IFS. When IFS processes this data, the IFS cost reports will show the overhead costs.

A USAEA,CA Customer Status Report will be produced with each billing cycle. The report will show the programmed amount of each customer reimbursable order (2544), the amount billed to date, and the unused amount. An Exception Report will be printed for each reimbursable order that has reached a specified percent fund use that has been predesignated by the user.

During the IFS/COEMIS Interface System development process, the following decisions were made:

1. The program should provide a variable overhead rate for computing job overhead cost on jobs that are not closed before consolidation.

2. COEMIS should prepare the Standard Form (SF) 1080 bill for services.

3. The report transaction to COEMIS must be changed to recognize the new source of input data.

4. The original concept did not include a Customer Status Report needed by the Financial Management and Work Coordination Branches for review and analysis of the work being performed. Two alternatives were considered to overcome this deficiency: incorporating the change and delaying the schedule accordingly, or finishing the interface program and then adding the new capability by 15 December 1980. The second alternative was accepted.¹⁹

5. The computer program will compare COEMIS against stored IFS data and report differences. The following known sources of differences are expected and treated in the interface: any Real Property (RP) COEMIS account that is not USAEA,CA activities; MDW staff engineer function cost transferred from

¹⁹ANNCR letter 1 July 1980, subject: "IFS/COEMIS Interface System."

account VW59.1 to MDW reimbursable accounts; and family housing cost transferred from account VW59.2.

6. As of 1 October 1980, USAEA,CA will have to pay for training. Training costs in MDW were not included in the FE budget, and will be covered as part of the overhead cost in the future.

7. The IFS accumulated undistributed costs must be distributed to appropriate accounts by 1 October 1980.

ADP Support

It was proposed that USAMSSA continue its support of IFS for MDW installations and help develop the IFS/COEMIS interface. Three new tasks were proposed: (1) provide resources to assist in the development of the IFS/COEMIS interface, (2) run IFS/COEMIS interface software in conjunction with IFS (this interface will read two IFS master files and produce COEMIS, IFS, and STANFINS transactions), and (3) run IFS and the IFS/COEMIS interface for Arlington Hall Station and Vint Hill Farms Station when these installations are incorporated into USAEA,CA.²⁰ USAMSSA agreed to continue supporting the IFS at MDW, but rejected the request for additional support on the following grounds:

1. Several agencies and a contractor are already involved in the development process; the addition of one more will further complicate the process, particularly in identifying sources of problems and dealing with interpretation of guidance.

2. USAMSSA has been instructed not to take on new work until its support to the Army staff can be improved.

3. Additional support to USAEA,CA would hinder efforts in other areas.

4. The proposed interface is an interim system which will be used until IFS is rewritten to take advantage of VIABLE hardware.²¹

USAMSSA recommended that the interface be designed and operated such that their assistance would be limited to making files available and continuing to run IFS. The recommended alternative was examined and found to be unacceptable. The following reasoning was offered to gain the needed support: (1) no contractors are involved, (2) USAEASA is responsible for maintaining the interface software, (3) USAMSSA and U.S. Army Computer Support Command (USACSC) will not be tasked for any programming resources, and (4) changes to the standard system should be minimal.

USAMSSA offered the use of its computers as a standard remote use to satisfy the first three tasks, but was unable to respond to the fourth task.²² A

²⁰ ANNCR letter, 7 July 1980, subject: "U.S. Army Management Systems Support Agency (USAMSSA) Support to the U.S. Army Engineer Activity, Capital Area (USAEA,CA)."

²¹ ANNCR letter, First Indorsement, 25 July 1980, Subject: "USAMSSA Support to the USAEA,CA."

²² ANNCR letter, Third Indorsement, 29 August 1980, subject: "USAMSSA Support to the USAEA,CA."

meeting was held between the Assistant Chief of Staff for Automation and Communications (ACSAC), USAMSSA, USAEASA, and FESA on the subject of support, but it did not result in a change in the USAMSSA position. A Memorandum for the Record and a draft Letter of Agreement were prepared formalizing the USAMSSA offer to provide computer time and very limited technical consultation time (see Volume IV).

An agreement was signed with MDW, guaranteeing data processing support to USAEA,CA during the 5-year test program. System training will be scheduled as new personnel become available.

Overhead

Funds budgeted for RPMA generally do not include funds for nonengineering support activities such as finance and accounting, personnel, purchasing and contracting, legal, supply, and automated data processing services. The true cost of RPMA is the cost of the budgeted DEH activities plus the value of all of the free support services provided by the installation (see Figure 34). FE overhead obligations covered only FE administrative and shop supervision costs. With the USAEA,CA operating independently from installation support activities, these "free" support activities must be provided by other USACE organizations. After consolidation, the cost of these services will be included in the apparent overhead cost which will substantially increase the apparent cost of RPMA. The cost increase in RPMA should be offset by a decrease in the base support budget. The objective of the USAEA,CA is to provide equal or better service without increasing the true cost of RPMA.

Overhead costs needed to support the USAEA,CA and supporting District operations can be charged to customers in several ways. The original concept was to charge all overhead to the "M" account, then for customers to reimburse the account periodically. In examining the flow of data between IFS and COEMIS, it was decided that overhead should be charged to the individual jobs as a function of the direct labor hours. Handling overhead as a fixed rate ensures that customers pay the full actual cost of the RPMA service and can budget more realistically. The method also prevents the problems related to prorating overhead charges to customers or being reimbursed as an item separate from the reimbursement for services.

The final overhead rates for FY81 were established by spreading the estimated cost of the USAEA,CA Headquarters operations, including the RPMM administrative activities and the related District activities, over the direct, productive shop manhours. In examining all functions to ensure accuracy in this approach, it was determined that the firefighting function only requires about 40 percent of the supervision/administrative support furnished other functions. Therefore, the overhead charges on that function were dropped accordingly. Based on this approach, the general administrative overhead rate to cover RPMM activities was calculated to be \$1.26 at Fort McNair and Fort Myer, and \$1.61 at Cameron Station per shop hour. The rate at Cameron Station is higher, since the installation is understaffed in comparison with the others; i.e., there are fewer productive hours to carry the overhead cost. The overhead rate to cover USAEA,CA Headquarters and related District costs

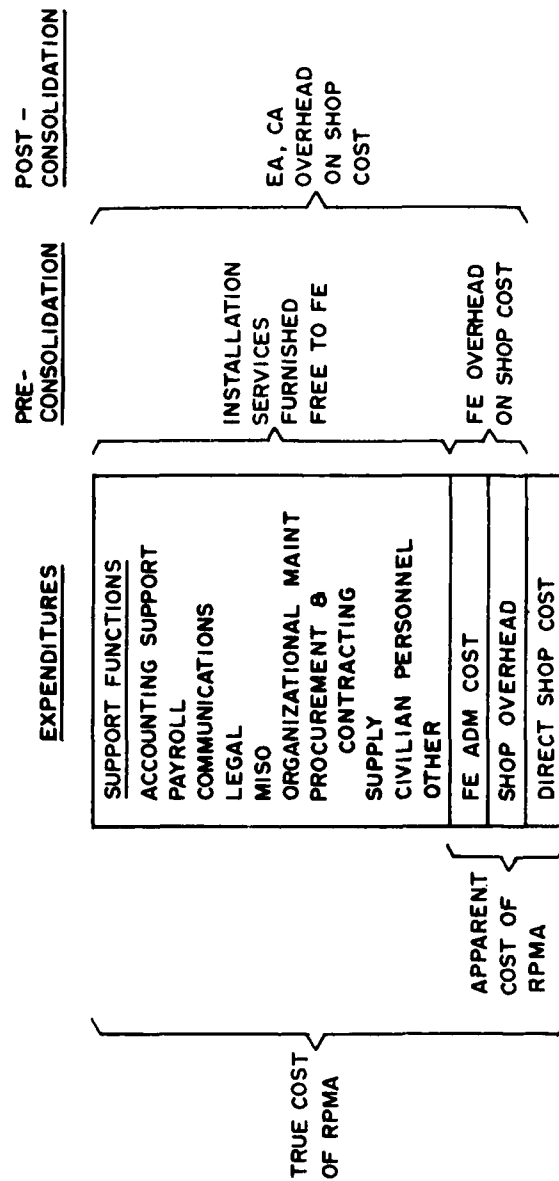


Figure 34. Change in overhead rates.

were set at \$7.76 per shop hour. Total overhead rates per shop hour are \$9.02 for Fort McNair and Fort Myer, and \$9.37 for Cameron Station. Overhead rates should be reviewed periodically to ensure that they are generating adequate operating funds and are as low as possible. Operating funds for installations being maintained through a contractor may have to be calculated on a different basis.

Stock Fund

The possibility of the USAEA,CA justifying a separate Stock Fund charter was investigated and the MDW requirement was found to be too small to support the change. The USAEA,CA will be responsible for the engineer portion of the MDW branch of the TRADOC Stock Fund. In using the fund, customers will prepare budgets covering their future requirements and submit the engineer portion to the USAEA,CA for consolidation by material category. Requirements are reconciled by the MDW Comptroller.

It was recommended that USAEA,CA consider providing items not in stock through a Stock Fund Blanket Purchase Agreement. A two-phase procedure was developed for handling stock-funded items. In the first phase, USAEA,CA would use the existing system. Staff Engineers would request supplies from the Stock Fund and be treated as off-post customers. USAEA,CA would keep records and enter all transactions into the IFS. Bills would be collected by USAEA,CA and forwarded to the supporting District for payment. In the second phase, the USAEA,CA would provide a warehouse on each site, with the Revolving Fund supplying the initial inventory. This approach would create a fund totally separate from the Army Stock Fund. With further investigation, it was found that the Army Stock Fund must be used, and that USAEA,CA must obtain approval before using its own local procurement procedures. This effectively prevented the USAEA,CA from using the Revolving Fund to meet the emergency requirement for Stock Fund items. With this guidance, the Stock Fund procedure was revised as follows:

1. Stock Fund supplies for USAEA,CA will be acquired using the MDW Stock Fund Acquisition Authority.
2. Baltimore District will obtain supplies requiring local procurement.
3. The MDW Finance Office will be the Paying Office for Stock Fund acquisitions. This position is based on the Finance Center's decision not to give the District Engineer authority to disburse from the Stock Fund appropriation. This decision also increased the number of personnel needed in the District office to support these activities. Baltimore District will use the Revolving Fund to reimburse the Stock Fund.

Support Agreement

MDW provides FE support and utilities to tenants on all three installations through the use of Interservice Support Agreements (ISSA). ISSA's in-force during the IPG period are listed in Appendix K. The agreements cover custodial services, fire protection, housing and lodging, storage and warehousing, utilities, administrative office space, maintenance and repair, minor

construction, disposal services, entomology services, and ice and snow removal. It was assumed that the USAEA,CA would be responsible for furnishing support and utilities to tenants. Based on this assumption, an effort was made to examine existing support agreements and contracts, and to determine (1) if the most appropriate methods were being used, (2) if all services were covered by reimbursable cost agreements, and (3) if there were more efficient methods for being reimbursed for these services. In comparing the possible use of an Interservice Support Agreement (ISSA) instead of a contract for utilities, it was found that an ISSA has to be supplemented with Special Conditions and requires the same approval authorities as contracts, which effectively eliminates any advantage attributed to the ISSA. From this examination, the following recommendations were made to DCSRM as an approach for the USAEA,CA to assume the support workload:

1. MDW should continue to program and budget for common service support where indicated by appropriate directives. In these cases, the ISSA covering the service would be between the supported activity and MDW.

2. ISSAs should be negotiated between the USAEA,CA and the supported activity for all RPMS services provided on a reimbursable basis.

3. MDW should reexamine the basis for common service support to tenant activities. If it is decided that support should be provided on a reimbursable basis, USAEA,CA could pick up the ISSA responsibility. However, it is not anticipated that such changes could be made until the supported activity has time to program the funds needed to support reimbursement.

4. USAEA,CA should negotiate utility sales contracts as required to provide reimbursement for supplied service. This could eliminate maintenance of ISSAs with commercial activities, such as banks and credit unions, which are not within the scope of interservices, interdepartmental, or interagency support (AR 1-35).

MDW concurred and accepted only the first recommendations.²³ As the owner of the real property being serviced, MDW decided that its role as host agency included the responsibility to support tenant agencies and that the USAEA,CA must assume the role of providing support to the host agency. Support agreements between the USAEA,CA and tenant agencies/utility suppliers would appear to be more efficient; however, the MDW approach assures that MDW will retain control over all activities affecting tenant agencies and installation utilities.

A draft SOP for Computation of Sales of Utilities Service Rates was developed and approved by the DCSEH Army Power Procurement Officer Representative (see Volume II).

Examination indicated that agreements and contracts could be changed to simplify administration by reducing the 104 agreements in force on the installations subject to consolidation and by using regional agreements. Work in this area was postponed until changes are made in the current host/tenant relationships on the installations.

²³ANNCR DF, 14 July 1980, subject: "ISSAs for RPMA Support: ANRM-RE-R, CMT 2, 15 September 1980."

Transfer of Payroll Function

The USAEA,CA became operational on 1 October 1980, when management and the responsibility for execution of RPMA were transferred from MDW to USACE. To effect this transfer, manpower resources were transferred from the MDW to the USAEA,CA TDA.

Assumption of payroll responsibilities by the USACE was delayed until 21 December 1980. During the period 1 October to 21 December 1980, payroll responsibilities for new employees were assumed by the MDW Payroll Office. This delay in transfer of responsibilities was established to simplify preparation of W-2 forms and the transfer process for new employees from agencies outside of MDW. Most employees were already in the MDW payroll system, so the decision to delay the function transfer did not cause a significant impact. The changeover was made with a mass transfer which converted the MDW Payroll Office Master File into a format acceptable to the Omaha Payroll Master File. Without this mass transfer, each employee would have needed a folder with forms to fill out for payroll deductions (W-4, Bond Deduction, Insurance Plans, Allotments to Banks, Credit Unions, etc., and home address for mailing of W-2s and Earnings and Leave Statements).

The two payroll offices use different Time and Attendance Forms (T&As). Therefore, before the transfer, the Omaha Payroll Office provided timekeepers with instructions on correctly preparing T&A cards. At the same time, timekeepers had to be instructed on how and when to submit T&A cards.

Budget Preparation

Budget preparation should begin with USAEA,CA personnel helping customers determine facility maintenance requirements. The USAEA,CA has detailed inspection reports which list observed deficiencies, and maintenance personnel can project the need for other repairs based on experience, life expectancy of the installed systems, and past performance of the facilities. This information should be used, rather than having the customers try to make a completely independent estimate of their requirements. The Plans Branch should help convert requirements into sketches and cost estimates where needed. The USAEA,CA should help prepare the budget submissions to higher authority by installation commanders. Consideration was given to a proposal that the USAEA,CA submit the budget request and provide funding for the installations. Upon further examination, the proposal was rejected, since the funds are one resource used by the Installation Commander to maintain effective mission performance of the installation.

To prepare a well-founded in-house budget, the USAEA,CA organization was divided into cost centers. Each cost center manager was made responsible for developing a detailed execution plan for his/her cost centers and defining budget requirements. Figure 35 lists the designated cost centers. In filling out the budget forms (see Figures 36 through 40), "direct cost" was defined in two ways. Direct costs are personnel and expenses which should be charged to a specific project or work requests through IFS L&E cards. Direct-cost expenses include shop personnel and their supervisors in the Real Property

<u>Cost Center Account Number</u>	<u>Cost Centers</u>
59.11	Commander/Director and Special Assistants
59.12	Resource Management Division
59.13	Administrative Office
59.14	Engineering Plans and Programs Division
59.15	Supply Division
59.16	Operation and Maintenance Division
59.171	Real Property Maintenance Manager's Office--Fort McNair
59.172	Real Property Maintenance Manager's Office--Fort Myer
59.173	Real Property Maintenance Manager's Office--Cameron Station
59.31, 32, 33, 34	Housing Management Division
59.35	Staff Engineer Other Than F.H.
59.41	Fire Prevention and Protection Branch--Fort Myer
40.	Real Property Maintenance Office Direct Charges--Fort McNair
40.	Real Property Maintenance Office Direct Charges--Fort Myer
40.	Real Property Maintenance Office Direct Charges--Cameron Station
40.	Direct Charges, Engineer Plans and Programs Division
40.	Direct Charges, Operation and Maintenance Division

Figure 35. Cost center account numbers.

COST CENTER _____		
COST CENTER ACCOUNT NO _____	BUDGET PERIOD _____	

ACCOUNT	PRODUCTIVE MANHOURS	AMOUNT
DIRECT COST:		
Civilian Labor, _____ Employees	_____	_____
Heating Fuels		_____
Materials		_____
Contractual Services:		_____
Purchased Utilities		_____
Contract Projects Over \$10,000		_____
Contract Services Less Than \$10,000		_____
Annual Contracts (Custodial, etc.)		_____
Equipment Acquisition		_____
TOTAL DIRECT COST		_____
OVERHEAD COSTS:		
Civilian Labor, _____ Employees		_____
Office Supplies		_____
Office Equipment		_____
Travel/Transportation of Things		_____
Training		_____
Beneficial Suggestions and Awards		_____
Rents		_____
ADP Support Cost		_____
Miscellaneous Contractual Services		_____
Other		_____
TOTAL OVERHEAD COST		_____

Figure 36. Cost center budget.

COST CENTER _____

COST CENTER ACCOUNT NO. _____

BUDGET PERIOD _____

INDICATE TYPE:

Direct _____

Sta. Mgr Overhead _____

G&A Overhead _____

MDW Staff Engineer _____

NAME	POSITION	TOTAL CR/STP	PER HR HOURS	RATE	COST

TOTAL MANHOURS & LABOR COST	_____	_____
CCEB (Fringe Benefits)	_____	_____
TOTAL OVERTIME	_____	_____
AWARDS & BENEFICIAL SUGGESTIONS	_____	_____
TOTAL PERSONNEL COST	_____	_____
TOTAL PRODUCTIVE MANHOURS	_____	_____

Figure 37. Budget support documentation personnel computations.

COST CENTER _____

COST CENTER ACCOUNT NO. _____ BUDGET PERIOD _____

_____ Heating Fuels	_____ Contracts (annual)
_____ Purchased Utilities	_____ Equipment Acquisitions
_____ Contracts + \$10,000	_____ Office Equipment

DESCRIPTION	UNIT	QUANTITY	COST

Figure 38. Budget support documentation.

COST CENTER _____

COST CENTER ACCOUNT NO. _____ BUDGET YEAR _____

(Detailed information to be accomplished in accordance with the current regulatory requirement.)

Figure 39. Budget support documentation training.

COST CENTER _____

COST CENTER ACCOUNT NO. _____ BUDGET PERIOD _____

ACCOUNT	MANHOURS	AMOUNT
Civilian Labor (Incl. CCEB, Overtime)		
_____ Employees	_____	_____
Supplies		_____
POL		_____
Equipment		_____
TDY		_____
Transportation of Things		_____
Rents		_____
Contractual Services		_____
All Other		_____
TOTAL		_____
SOURCE OF FUNDS:		
Direct		_____
Reimbursement		_____

Figure 40. U.S. Army Engineer Activity, Capital Area MDW staff engineer function operating budget.

Maintenance Office and personnel in the Engineer Plans and Program Division and the Operations and Maintenance Division. Administrative and all other personnel and expenses of a general nature not associated with a specific project/work request are budgeted under "overhead" cost. A Program Manager in the FMB will consolidate the detailed requirements, ensure a balanced program within the organization's financial limitations (as determined by the consolidation of the installation facility maintenance budgets), prepare the final operating budget, and establish the applicable overhead rates.

Basic Procedures

The flowcharts in Appendix C were developed to investigate all interactions and to ensure a comprehensive plan of operations which could easily be explained to incoming personnel.

6 SUPPLY MANAGEMENT

Task

The mission of the Supply Management Task Group was to develop the supply capability to adequately support USAEA,CA operations.

Existing Support

The supply system for MDW has been consolidated for some time under MDW, DCSLOG with a warehouse at Cameron Station. The existing system did not adequately support the MDW operations and could not provide USAEA,CA with the control needed to ensure the availability of supplies and correct distribution of cost. In addition, the system did not use the computer-based Facility Engineer Supply System (FESS). With these factors in mind, it was apparent that the existing system could not be expanded to provide centralized supply to all installations in the consolidation.

Concept

A new supply system will be established to provide centralized support to all NCR installations as part of the USAEA,CA organization. FESS will be used to control stock levels. A detailed task "K" CPM network is in Appendix B (Figure B-10).

Transfer of Responsibility

It was proposed that the FE supply function be transferred from MDW, DCSLOG to DCSEH during the IPG period, and then to the USAEA,CA on 1 October 1980. Transferring the function to DCSEH would permit early incorporation of organizational changes and development of more realistic plans for the consolidated USAEA,CA supply function. Figure 41 shows the supply organization structure developed by the IPG.

The decision to transfer the supply function to DCSEH was made in May 1980, but required that a separate study be made to determine how the transfer could be made.²⁴ DCSEH developed the second study, which was completed and accepted 21 June 1980.

Moving the function transferred 16 manpower authorizations from DCSLOG to the USAEA,CA. Thirteen persons from the following organizational elements were affected by the transfer: Materiel Management, Data Conversion and Files, Storage Inventory, and the Self-Service Supply Centers. The transfers were done in phases (see Figure 42).

The three Self-Service Centers and their operating personnel were transferred intact with only minor operational changes. The transfers were

²⁴ANEN letter, 14 May 1980, subject: "Engineer Supply Policy."

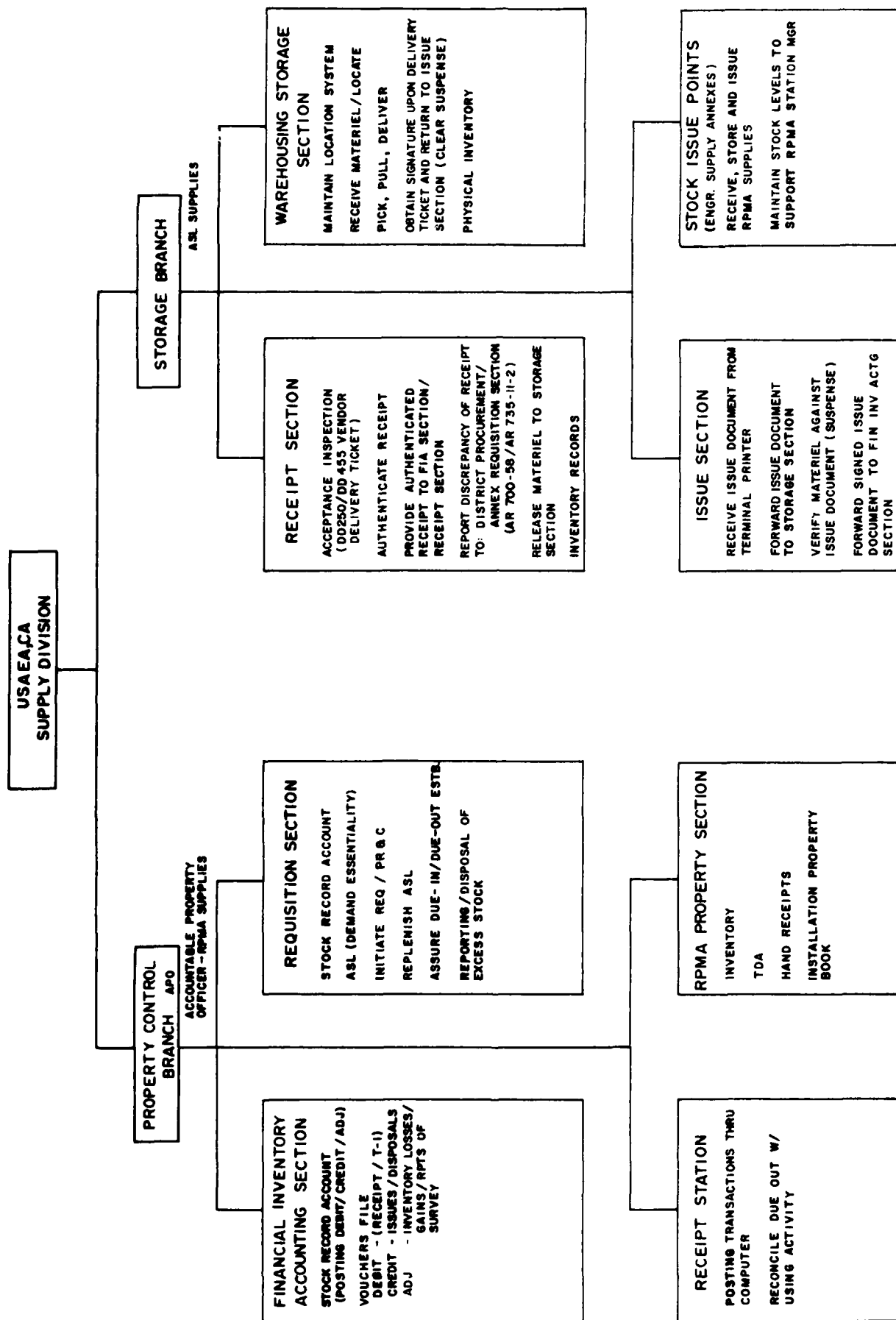


Figure 41. Supply organizational structure.

made one at a time for an orderly transition. After the transfers, operating personnel requisitioned supplies from local suppliers through BPA or from the DCSLOG warehouse. Priorities were placed on getting proper IFS input data and on preparation and use of a complete supply catalog.

The centralized engineer warehouse was needed as soon as possible, so the engineer supply function of the DCSLOG warehouse was transferred (Figure 43) when the facility was ready.

The transfers were temporarily constrained until the USAEA,CA recruited a Property Control Branch Chief to serve as the Accountable Officer and obtained a DODAAC from DCSLOG.

FESS

In the initial planning, a decision was made to operate the supply system using the FESS computer-based system to replace the existing, unacceptable DCSLOG control system. This decision defined the new supply control system and required the acquisition of a FESS computer and operating system. FESA modified its existing contract for acquiring FESS hardware and software for several organizations to give the USAEA,CA the needed priority. Based on existing contractual delivery dates, FESS was to be installed and operating at USAEA,CA by 15 December 1980.

Central Warehouse

An analysis was made to determine the needed warehouse space. Each item was identified by supply personnel and categorized on the basis of being a binned item, a palletized item, a palletized (non-stockable) item, or a special rack item. The following breakdown was developed:

Bin Line Count	3,081
Palletized Line Count	495
Palletized/Non-Stockable	34
Rack Storage - Pipe	28
- Lumber	21
- Metal	20
- Other (16 sq ft)	105
- Other (6 sq ft)	<u>316</u>
Total Line Count	4,100

Future total requirements were estimated to be 6000 lines. For comparison, Fort Belvoir has 5233 lines, Fort McPherson 5780, and Fort Stewart 5500. Most TRADOC and FORSCOM installations have fewer than 5000 lines.

The number of lines was converted into the appropriate storage configurations using DOD Manual 4145.19-R-1 (bins, pallets, and racks) and the calculated floor area requirements. Additional space was added for shipping, receiving, holding, etc. The initial warehouse was estimated to contain about 23,491 sq ft and was expandable to 34,377 sq ft for the 6000 lines.

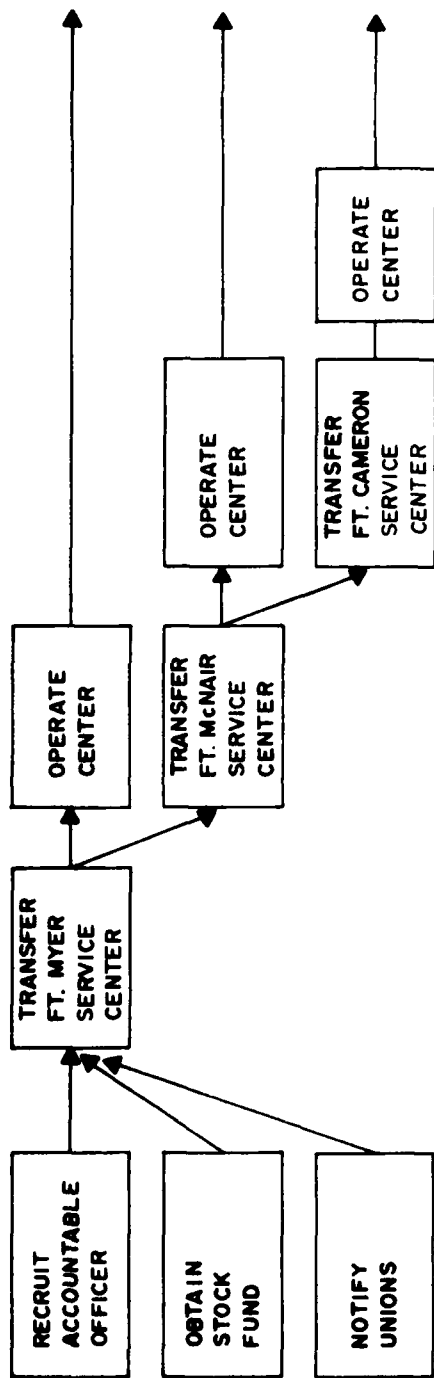


Figure 42. Transfer service centers from DCSLOG to USAEA, CA.

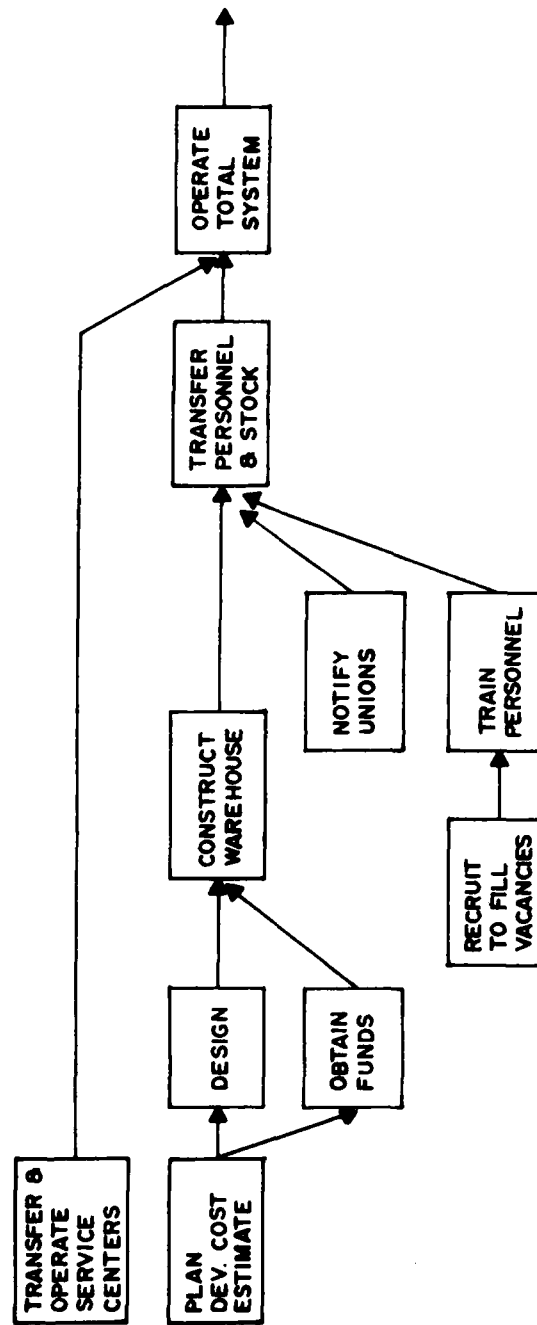


Figure 43. Establishing the warehouse system.

Based on this definition of requirements, a contract was awarded to an A/E firm to prepare a feasibility study for relocating the FE's supply storage operation. An intensive on-site review for adequate facilities was made at Fort Myer and Cameron Station to compare existing DCSLOG facilities with alternative facilities.

Based on preliminary cost estimates and an evaluation of the losses caused by relocation of existing activities, Building 9 on Cameron Station was selected as the best alternative. Administrative space for the Baltimore District Procurement Annex will also be located with the Supply Division in Bay No. 4 of Building 9. The administrative space was estimated on the basis of providing space for 18 or 19 people, plus a conference room and space for recordkeeping. The A/E prepared an estimate of \$450,000 for modifying the existing building as a minor construction project. The bins, racks, and pallets are estimated to cost an additional \$125,000.

A DD Form 1391 describing a minor construction project for \$495,000 for alterations to Building 9 was developed and forwarded to OCE for approval on 29 August 1980.²⁵ The scope of work covered renovation of 36,000 sq ft of existing warehouse space, upgrading of an area for office use including toilets, site improvements, and a fenced storage area.

Workload Estimates

DCSLOG analyzed the MDW Property Control Branch operations for 1 year to determine the following FE-related workload and its proportion of the total:

<u>Activity</u>	<u>Transactions</u>	<u>Percent of Total</u>
1. DATA CONVERSION AND FILES SECTION		
o Requests processed	16,647	23
o Documents processed for daily supply cycles	66,588	22
o Documents filed	33,394	23
2. MATERIAL MANAGEMENT SECTION		
o PCB stockage	1,711	21
o Manager-directed requests processed	6,629	29
o Local purchase requests, obligations receipt, and issue documents processed	7,000	39
o Local purchase documents filed	21,696	39
3. STORAGE AND INVENTORY SECTION		
o Lines received and issued	9,000	20
o Lines inventoried	1,800	14

²⁵ANEN-PP letter, 29 August 1980, subject: "Exigent Minor Construction Project, Alterations to Building 9, Bay 4, Cameron Station."

These estimates were used to determine the number of people to be transferred to the DCSEH/USAEA,CA.

Training

Supply personnel coming into the USAEA,CA, including those being transferred from DCSLOG, will have to be trained to operate the supply system. Personnel will also have to be trained to use FESS after conversion from the new manual system to the automated system. Based on the predicted schedule of activities, two training outlines were developed: (1) use of the manual USAEA,CA system at the service centers that were being used at the central warehouse, and (2) the use of FESS.

Property Book

Transfer of all Property Book items (TDA, common table of allowances [CTA] and maintenance and service [M&S] equipment) requires a joint, 100 percent physical inventory in accordance with AR 710-2.²⁶ However, transfer of other RPMA supplies does not.

Transfer of TDA equipment (Section III of the TDA equipment list) from MDW to USAEA,CA was done on DA Form 4610-R, which satisfies inventory requirements. A letter was prepared requesting approval of DA-controlled items needed by USAEA,CA and sent to DCSLOG for action. With DCSLOG approval authority, this equipment was documented in Section III, TDA in accordance with AR 310-49.²⁷ Transfer of approval authority was staffed through OCE and DA.

Figure 44 shows the actions needed to transfer RPMA supplies to the USAEA,CA consolidated warehouse. The transfers were (1) from the DCSLOG Property Control Branch to DCSEH, and (2) from DCSEH to USAEA,CA.

Figure 45 shows actions needed to transfer Property Book (PB) items. These actions/activities anticipate the transfer of the PB Account (DCSEH) to the PB account of USAEA,CA.

Organizational Procedures

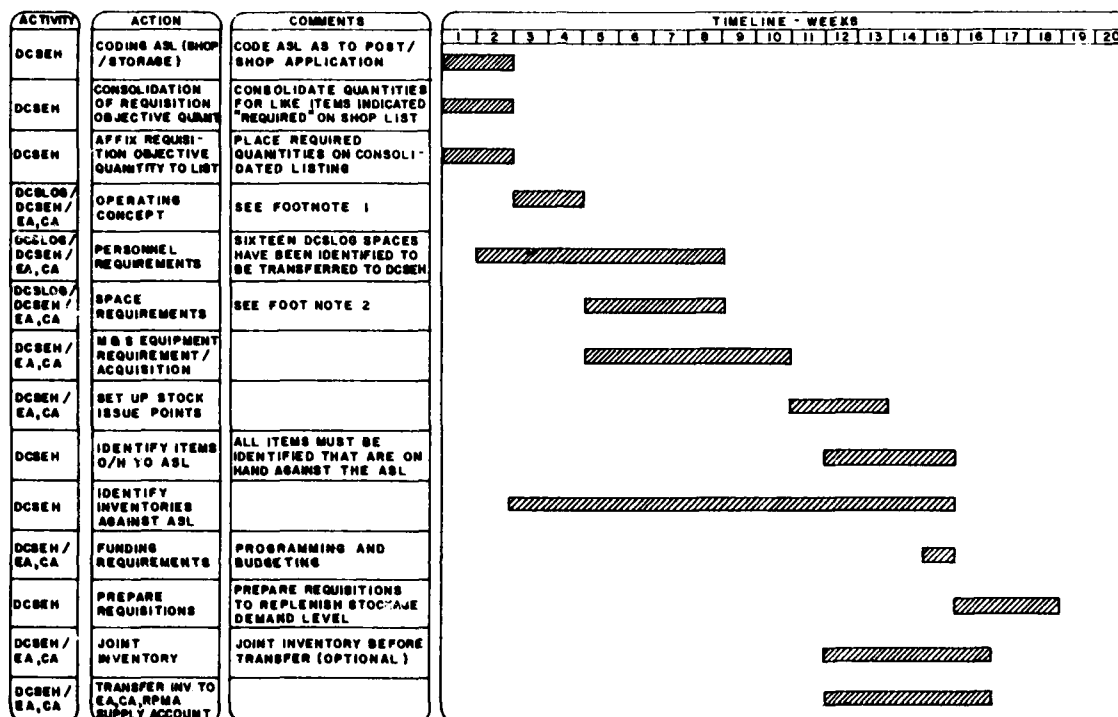
Appendix B (Figure B-10) shows procedures for setting up the basic supply activities.

USAR Assistance

The Supply function was assisted by the 1006th General Supply (GS) Company, U.S. Army Reserve (USAR) in establishing a central warehouse at Cameron

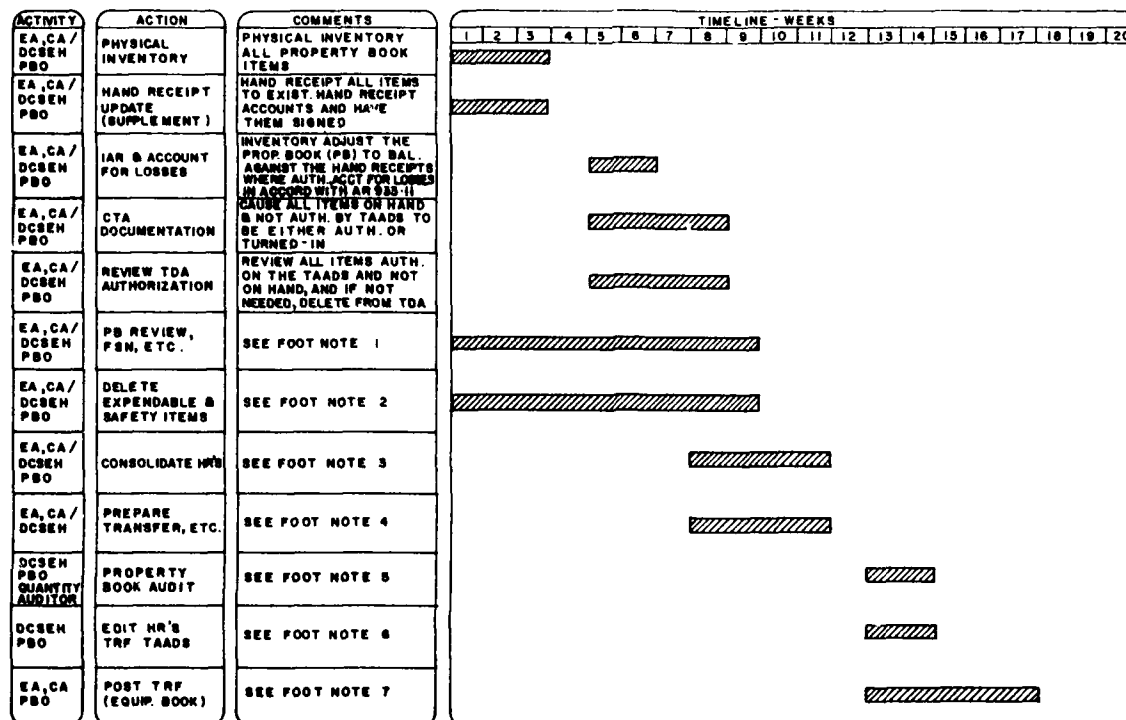
²⁶Inventory Management: Material Management for Using Units, Support Units, and Installations, AR 710-2 (Department of the Army [DA], 1 August 1971).

²⁷Military Publications: The Army Authorization Documents System (TAADS), AR 310-49 (DA, 15 December 1980).



1. Operating Concept--The Engineer Supply Annexes (Ft. Myers, Ft. McNair, and Cameron Station) will be transferred to the operational responsibility of DCSEH as soon as the transfer from DCSLOG can be completed. This event is controlled by the recruitment of the accountable officer. The complete transfer (including the items for the USAEA, CA central warehouse) is controlled by the availability of the warehouse (physical facility).
2. Physical space presently in use for the three Engineer Annexes will remain in use with no immediate change(s) anticipated. The balance of physical (facility) space required is dependent on the space assignment and cost estimate pertaining to Building No. 9, Cameron Station.

Figure 44. Actions to transfer RPMA supplies.



1. Screen all items on the PB thoroughly for proper Federal Stock Numbers (FSN) and line item numbers (LIN) and flag when reportable in accordance with AR 711-5.
2. Delete all expendable, non-reportable items from the PB; this includes safety clothing and equipment issued to individuals.
3. Consolidate existing hand receipts into three accounts (one for each installation facility engineer) in LIN sequence, and have the receipts signed by each facility engineer. Sub-hand receipting will be authorized.
4. Prepare a transfer of all items on the DCSEH property book to the USAEA,CA Property Book Officer (PBO), IAW para. 2-14, AR 710-2. This transfer must be in LIN sequence indicating same along with FSN complete nomenclature, makes, models, serial numbers, and unit cost.
5. Review/edit hand receipts and transfer document, verify them, and spotcheck each hand receipt to ascertain accuracy (physical inventory); edit against TDA and CTA.
6. Post transfer to USAEA,CA PB submit DA Form 2408-9 where applicable, update 711-5 report to add all reportable items.
7. When the DCSEH PB is at zero balance, the entire account must be audited, certified correct, and destroyed by a qualified PB auditor. If discrepancies are found, these must be corrected according to AR 735-5.

Figure 45. Actions to transfer PB items.

Station. It was suggested that both organizations would benefit if the 1006th GS Company could use its annual training period to help USAEA,CA establish its central warehouse. The concept was discussed with unit personnel, and a formal proposal was sent to the USAR unit during May 1980.²⁸

Three alternatives were proposed:

1. Provide clerical help to establish criteria for the authorized stockage list (ASL), code and catalog ASL items, develop supply document flows, develop a warehouse plan-o-graph, and prepare input to FESS (five men, 2 weeks during the period of 14 July to 29 August).
2. Provide personnel for rewarehousing, including housekeeping improvement, rewarehouse stocked items, item identification, inventory, and disposal actions (five men, 2 weeks during the period of 14 July to 29 August).
3. Provide the support discussed above, but accomplish the work with 40 men in one 2-week period.

USAEA,CA agreed to provide all on-the-job training.

The proposed alternate training activity was submitted for approval to the 97th ARCOM on 19 May 1980.²⁹ Based on an exchange of letters and subsequent discussions, a Memorandum of Agreement was written, and was approved on 26 July 1980. The MDW point of contact (POC) established a schedule for enlisted personnel to assist USAEA,CA in the Cameron Station Warehouse. The assistance was successfully provided as planned.

Basic Procedures

The flowcharts provided in Appendix G were developed to investigate all interactions and to ensure a comprehensive plan of operations which could easily be explained to incoming personnel.

²⁸ ANNCR letter, 19 May 1980, subject: "Annual Training 1006th General Supply (GS) Company."

²⁹ AFKA-ACEC-OI letter, 19 May 1980, subject: "Alternate AT80 for an Element of the 1006th GS Co."

7 PROCUREMENT MANAGEMENT

Task

The Tasking Letter required that the USACE provide needed procurement support through the Division/District structure. Major problems addressed were how to provide the support and what contracting authority should be given to the Director, USAEA,CA.

Existing Support

Procurement support to the FEs in MDW has been provided by centralized functions. Supplies were requisitioned from the Deputy Chief of Staff for Logistics (DCSLOG) central warehouse or warehouse annex at each MDW installation. DCSLOG maintained its inventory by ordering from GSA depots and the supporting procurement office. DCSLOG BPAs could be used to acquire items that were not available through the warehouse or items needed in an emergency. The MDW Procurement Office acquired non-GSA depot items, using the most appropriate technique. RPMA and services were obtained by the MDW Procurement Office and inspected by the FE with Contracting Officer's Representative (COR) authority.

Concept

Based on the requirement that all procurement actions must follow USACE procurement procedures, 12 alternative organizational concepts were considered. Initial evaluation of alternatives 1 through 6 suggested that 7, 8, and 9 were best. However, DCSACQ,MDW objected³⁰ to these proposals, and offered three more. The following alternatives were identified and evaluated:

1. The District could provide full procurement support at the District Office. This alternative could result in some processing delays and frequent travel between the District and USAEA,CA.
2. The District could provide procurement support and the USAEA,CA could be given Ordering Officer authority or Resident Contracting Officer (RCO)/COR authority. This alternative would allow USAEA,CA to be more responsive, but would not overcome the inefficiencies of the previous alternative.
3. The District could provide local procurement support for actions of more than \$10,000 and establish an annex at USAEA,CA with small-purchase capability for up to \$10,000.
4. The District could provide full procurement support through an annex procurement office located with USAEA,CA. Different variations and authority limits could be used, with complex procurement actions going back to the District as necessary.

³⁰ ANACQ DF, 19 August 1980, subject: "Purchasing and Contracting Support to USAEA,CA."

5. The District could provide procurement support in actions of more than \$10,000, and MDW could continue to handle small purchases.

6. The USAEA,CA could develop a complete procurement capability and use the District capability in an advisory capacity.

7. The supporting district could provide full procurement support from its District Office location.

8. The DCSACQ could continue to handle all small procurement actions of less than \$10,000, with remaining procurement support being provided by the District location.

9. The Supporting District could provide total support for procurement actions of less than \$10,000 through a modestly sized annex located with the USAEA,CA; the remaining support for procurement actions of more than \$10,000 could be provided by the District.

10. The DCSACQ could continue to handle all purchases and contracts valued at less than \$500,000, with the remaining procurement support provided by the District Office.

11. The USAEA,CA could provide a procurement staff which would handle all purchases and contracts valued at less than \$500,000, with the remaining procurement support provided by the District Office.

12. The USAEA,CA could provide procurement support for purchases and contracts valued at less than \$500,000 through procurement offices at each installation; all other procurement support would be provided by the District Office.

The alternatives were discussed with the responsible managers³¹ in the two candidate District Offices and evaluated on the following basis:

1. Organizational simplicity--the organization should not be fragmented.

2. Responsiveness--processing time should be minimized to provide timely support. If procurement functions were split between two organizations, by value or purchases, an excessive amount of time could be lost processing purchase orders that, upon receipt of firm prices, are found to be erroneously classified and must be transferred to another procurement organization.

3. The amount of additional paperwork should be minimized.

4. The transition process should be as simple as possible. The USAEA,CA organization must adjust to the procurement process used by the supporting District. It would unnecessarily complicate operating procedures if USAEA,CA had to adjust to the procedures of two organizations.

While alternatives 7, 8, and 9 were being evaluated, the original guidance concerning the District's provision of all procurement support was

³¹Memo to COL Trayers, 7 May 1980, subject: "Meeting with District Procurement Chiefs."

re-examined. District offices were directed by NAD not to get involved in the small transactions needed to support the FE function. In addition, it was to be assumed that DCSACQ would continue to provide Small Purchase Support up to \$10,000, with Small Purchase Support transferred to a District Office in the future.³²

After considering DCSACQ objections to alternatives 7, 8, and 9 and their suggested alternatives, alternative 9 was selected. The Supporting District agreed to provide all procurement support activities through an on-site annex for transactions of less than \$10,000 and through the District Office on all others. Until the District establishes an on-site annex, DCSACQ agreed to provide small-purchase support.

Alternative 9 was selected based on the following factors:

1. The annex represents an option for providing procurement and contracting (P&C) support for actions of more than \$10,000, which requires no legal review, audit, or review by a Board of Awards. Actions for more than \$10,000 would require these reviews/approvals.
2. The District has a multidisciplinary, experienced staff to support P&C needs for technical and legal reviews, printing, small business advice, audit/price analysis, labor relations, and general contract administration. Provision of this support on-site at USAEA,CA will require additional staffing immediately. If USAEA,CA had to obtain legal, printing, and other needed support from activities not under Corps or USAEA,CA control, delays in processing and general inefficiencies in response time would occur.
3. For Finance and Accounting (F&A) reasons, it is better to have F&A and P&C interests under one command structure and at the same location. This would provide better coordination, faster recording of transactions, better control of F&A documents, and quicker, more accurate payments.
4. With full annex support, the District Engineer (as responsible contracting Officer) and District Chief of Procurement would forgo direct management control, yet retain full management responsibility. This is an undesirable situation, both from the District and the Army standpoint, and in a responsible legal/contractual sense.

Use of the MDW,DCSACQ for transactions of less than \$10,000 was rejected for the following reasons:

1. DCSACQ provides (P&C) support to several organizations other than DCSEH. It would be better to provide (P&C) support for actions of more than \$10,000 to the USAEA,CA through a dedicated office (annex) whose sole mission is to satisfy the Director, USAEA,CA.
2. Fragmentation of P&C support (between DCSACQ and the Baltimore District) would cause confusion among vendors, contractors, and USAEA,CA personnel, and would not promote the goal of organizational efficiency which the RPMA consolidation is striving to achieve.

³²Memo for File (MFF), 14 August 1980, subject: "Procurement Support per Discussion with COL Trayers."

3. There would be a loss of personnel spaces if the function were transferred, which would be disruptive to DCSACQ. However, the principal goal of the RPMA effort is to test the efficiencies of consolidation, not to protect the integrity of existing organizations.

4. Allowing DCSACQ to retain responsibilities for actions of less than \$10,000 would create long-range difficulties for the later phases of the consolidation. As other installations are phased into the consolidation plan, there will undoubtedly be similar efforts to retain all or part of the P&C responsibilities at the installation level instead of transferring these duties to the Corps or to the MDW DCSACQ (if it retains this responsibility). The Corps represents a "third party option" which can cross command boundaries and make P&C support smoother during all consolidation phases.

5. Allowing DCSACQ to retain responsibility for actions of less than \$10,000 would not be acceptable for two reasons:

a. The F&A (Paying Office) for DCSACQ support would be the MDW F&A Office. This would not comply with directions from the Deputy Secretary of Defense in Decision Package number 661, dated 21 December 1979.

b. Allowing the Supporting Corps District to be the paying office for DCSACQ support could create a confusing situation, which might cause errors or time delays.

6. "True" RPMA costs could be captured better if only one procurement organization provides P&C support.

Workload Definition

Workload data were needed from the existing organizations to determine the predicted workload of the consolidated organization. Data were collected using a questionnaire and forms (Figure 46)--first in a small mail request, and later during on-site visits. The procurement workload, as defined in the survey results, is given in Figure 47. Numbers are presented as received; no effort has been made to investigate the validity of the numbers or to ensure their comparability.

1. The MDW Engineering and Construction (non-MCA) varied between \$12 and \$15 million annually covering 100 to 125 projects prior to construction.

2. O&MA funds under the Special DA appropriations category ranged between \$4 and \$6 million annually, with projects varying from \$500,000 to \$2 million. Most of these projects were handled by the Baltimore District.

3. Work in the K, L, and M accounts varied from \$7 to \$8 million per year spread over about 100 projects. Design is done either in-house (\$1 to \$2 million projects) or under open-end A/E (\$6 to \$7 million projects).

1. Briefly describe, by functional area, how you are providing support to the Facilities Engineer. Problems encountered in providing support.
2. Do you have personnel dedicated full or part time to supporting the FE? Please identify grade classification and percent of time for each employee involved.
3. What contracting limitations, Procurement Authorities do you have? To what extent are Contracting Officer, Ordering Officer, and Authorized Representative of the Contracting Officer delegations used? To whom are these delegated? Please provide copies of any COPs you have developed or use.
4. What specific service contracts do you administer for the FE, who monitors performance, gives direction to contractor? What are your views on the strengths and/or weaknesses of service contracts based on your experience?
5. Are you involved in the acquisition/disposal of surplus property on behalf of the FE? What is the nature of your involvement, and what types of equipment are involved?
6. Request a copy of the organization chart for the procurement functions and a copy of the job description for any position dedicated in part or totally supporting the FE.
7. Who provides legal support? How many people provide legal support (in man-years)?
8. What contractual actions are reviewed for local sufficiency? Above what dollar figures are you getting legal review?
9. How do you get audit support? Who provides this support? To what extent is it required?
10. Do you see any significant change in workload in the future?
11. How are emergency procurement actions handled during off-duty hours? Are they frequent?
12. Request workload data as indicated on attached form be provided for FY79.
13. Identify recurring service contracts that are in support of the Facilities Engineer that would be transferred to the "Engineer Activity-Capital Area" when consolidation is effected.
14. How many contracts other than firm fixed price do you have and what are they?

Figure 46. Procurement questionnaire.

Table I

Workload in Support of Facilities Engineer
FY79

Type of Action	No. Actions	Total Value
Individual Open-Market Purchase Orders (DD 1155)		
Delivery Orders Against CSA/FSS		
DD 1155 (Construction)		
Imprest Fund Purchases		
BTD FM 44 Purchase		
Number of Blanket Purchase Agreements (Charge Accounts)		
Call Order Against Blanket Purchase Agreements		
Construction Contracts: over \$10,000		
Supply and Equipment Contracts: over \$10,000		
Service Contracts: over \$10,000		
Eight "A" Contracts		
Open-End A/E Contracts		
Work Orders Against Open End A/E Contracts		
List any other actions in support of FE on reverse side.		

Figure 46. (Cont'd).

Table II

List All Recurring Service Type Contracts Awarded During FY79
In Support of the Facilities Engineer

<u>Description</u>	<u>Dollar Value</u>	<u>Period of Source</u>	<u>Type Contract (FFP, CPFF)</u>
--------------------	---------------------	-------------------------	--------------------------------------

Table III

List Any Indefinite Delivery Type Contracts (Requirements Contracts)
Awarded During FY79 in Support of the Facilities Engineer

<u>Description</u>	<u>Estimated Dollar Value</u>	<u>Period of Contract</u>
--------------------	-----------------------------------	---------------------------

Table IV

List All Contracts Other Than Firm Fixed Price Contracts
Awarded During FY79 in Support of the Facilities Engineer

<u>Description</u>	<u>Dollar Value</u>	<u>Type of Contract (CPFF, ECT)</u>
--------------------	---------------------	---

Table V

Workload Data in Support of the Facilities Engineer
Contract Modifications, FY79

<u>Supply Services, Construction, etc.</u>	<u>No. of Actions</u>	<u>Total Value</u>
--	-----------------------	--------------------

Figure 46. (Cont'd).

	AHS & MDW	VFHS	Ft. Belvoir	DMAHTC	WRAMC
1 Individual Open Market P.O.	1223	*	1708	20	496
2 Construction (DD 1155)	140	*	30	0	55
3 Imprest Fund Purchases	340	*	43	0	0
4 Number of BPA	175	108	34	11	0
5 Call/Order Against BPA	298	*	230	55	0
6 Del Orders Against GSA/FSS	164	*	179	0	0
7 Del Orders Against Requirement Contracts	99	51	186	0	10
8 Construction Over \$10,000	40	52	24	9	21
9 Supply and Equipment Contracts over \$10,000	3	1	1	4	13
10 Service Contract Over \$10,000	16	6	12	4	14
11 8A Contracts	6	56	4	3	0
12 Open End A/E Contracts	12	2	0	0	0
13 Work Order Against Open End A/E Contracts	51	14	0	0	0
14 Total Small Purchase Actions	*	3221	2146	*	561
15 Number of Solicitations Issued	92	*	*	*	*
16 Total Contracts Awarded	*	59	51	*	*
Value (1-16)	13,451,046	\$3,500,453	\$9,844,960	\$1,711,190	\$2,985,000
17 Utilities	14	*	10	280	*
Value (17)	\$2,443,830	*	*	*	*
18 Recurring Service Contracts	11	4	20	3	14
Value (18)	\$15,222,910	\$193,000	\$3,948,040	\$43,949	\$1,398,818
19 Indefinite Delivery Contracts	3	1	9	1	2
Value (19)	\$288,400	\$40,000	\$2,121,712	\$196,592	*
20 Manpower	9.66	9.2	5.3	*	*

*Not Provided

Figure 47. Workload definition.

4. Reimbursable and Family Housing work varied from \$1 to \$1.5 million annually.

Contracting Authority

The Tasking Letter directs that the IPG recommend specific contracting authority limits for minor construction, maintenance and repair, services, family housing, and Reserve activity contracts. Limits should be those needed to make the USAEA,CA responsive, be consistent with existing regulations and guidelines,³³ and be acceptable to the Supporting District. A draft paper was developed,³³ and sent both to the North Atlantic Division and to the Baltimore and Norfolk District Offices for review and approval.³⁴ Both Districts concurred with the proposed authorities,³⁵ and Baltimore recommended limits applicable to the RCO which exceed those provided in ER 1180-1-1.³⁶ Norfolk District provided guidance on the process of appointing the RCO, and gave examples of documents used in District transactions. Recommended authority limits were submitted to OCE for approval, along with a request to modify ER 1180-1-1 (Figure 48).³⁷ OCE approved the authority limits and agreed to revise ER 1180-1-1 to include RCO authorities for functions other than construction; however, the dollar amount will be left to the discretion of the appointing authority. OCE also requested minor revision to the dollar amounts on other applications.³⁸ To support the requested authorities, a statement was furnished to OCE outlining expected District support and analyzing the predicted workload (see Volume II).

Implementation

A Memorandum of Understanding (MOU) between DCSACQ, MDW, and the Baltimore District Engineer was prepared. The MOU (see Volume III) outlined how the procurement support would be handled by DCSACQ,MDW during the transition period until a full support capability could be established for USAEA,CA at the Baltimore District and at an on-site annex. Larger transactions would be handled in the District Office.

Basic Procedures

The USAEA,CA mode of operations is unique in the Army because of the number of organizations involved in the basic procedures. The flowcharts in Appendix H were developed to identify and solve interface problems.

³³ ANNCR letter, 23 April 1980, subject: "COR/RCO Authorities by Position for RMPA Contracting."

³⁴ ANNCR letter, 4 June 1980, subject: "Contracting Authorities for Commander and Director, USAEA,CA."

³⁵ NACPS letter, 19 June 1980, subject: "Contracting Authorities for Commander and Director, USAEA,CA."

³⁶ NADSU letter, 24 June 1980, subject: "Contracting Authorities for Commander and Director, USAEA,CA."

³⁷ ANNCR letter, 25 June 1980, subject: "Contracting Authority Limits."

³⁸ DAEN-MPR, First Indorsement, 29 July 1980, subject: "Contracting Authority Limits."

<u>Type of Contract</u>	<u>Contracting Officer</u>	<u>Resident Contracting Officer</u>	<u>Contracting Officer's Representative</u>	<u>Ordering Officer (SF 44)</u>	<u>Blanket Purchase Agreement (BPA)</u>
Minor Construction	District Engineer	\$25,000	As Delegated	\$500 Per Action	\$500 Per Call
Maintenance and Repair	District Engineer	25,000	As Delegated	500 Per Action	500 Per Call
Supply and Service	District Engineer	25,000	As Delegated	500 Per Action	500 Per Call
Family Housing					
Maintenance	District Engineer	25,000 Per Set of Quarters	As Delegated	500 Per Action	500 Per Call
Repair	District Engineer	20,000 Per Set of Quarters	As Delegated	500 Per Action	500 Per Call
Minor Construction	District Engineer	5,000 Per Set of Quarters	As Delegated	500 Per Action	500 Per Call
Reserve Activities	District Engineer	25,000	As Delegated	500 Per Action	500 Per Call

Figure 48. Limits of authority.

8 STAFF ENGINEERING AND REAL PROPERTY MAINTENANCE MANAGEMENT DUTIES

Staff Engineer

Relocating the FE function to an independent Corps of Engineers organization created the need for a Staff Engineer (SE) to fulfill the residual engineering functions and to ensure that the USAEA,CA provides adequate RPMA support. The Staff Engineer would serve as a consultant and advisor to the Installation Commander, other tenant commanders, and installation staff agencies, and act as the single manager for all aspects of the installation's RPMA. The SE works directly with the RPMM, scheduling work to meet the customer requirements and ensure that the USAEA,CA is responsive to the Installation Commander's requirements.

The SE plans, develops, coordinates, budgets, and approves RPMA through the following activities:

1. Provides housing management (excluding RPMA direct execution)
2. Provides reimbursement for RPMA services
3. Prepares the requirements portion of the Annual Work Plan
4. Approves the Station AWP and provides funding for AWP execution
5. Station Master Planning
6. Establishes limits for Director, USAEA,CA and RPMM authorization to approve Service Orders and Individual Job work requests.
7. Provides a list of individuals authorized to submit work requests to the RPMM.
8. Approves/disapproves work requests that exceed the Director, USAEA,CA, assigned approval authority.
9. Programs and budgets RPMA costs to be billed to the installation, including utilities costs.
10. Coordinates with the Chief, Operations and Maintenance Division to resolve conflicts and problems beyond a normal scope of resolution.

The proposed SE organization (Figure 49) is based on functions to be performed.

Table 1 gives space requirements for the SE organization, based on the number of people required to perform the various functions prior to consolidation.³⁹

³⁹ANNCR letter, 3 July 1980, subject: "Staff Engineer Requirements/Authorizations (R/A) To Perform Residual Staff Engineer Functions."

AD-A142 150

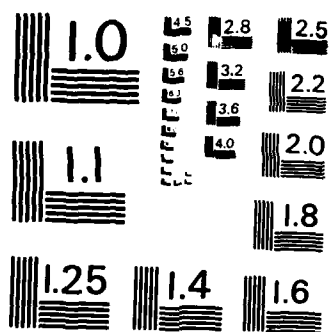
RPMA (REAL PROPERTY MAINTENANCE ACTIVITIES)
CONSOLIDATION ACTIVITIES IN T. (U) CONSTRUCTION
ENGINEERING RESEARCH LAB (ARMY) CHAMPAIGN IL
R BLACKMON MAY 84 CERL-TR-P-156-VOL-1 F/G

2/4

UNCLASSIFIED

F/G 5/1

NL



MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

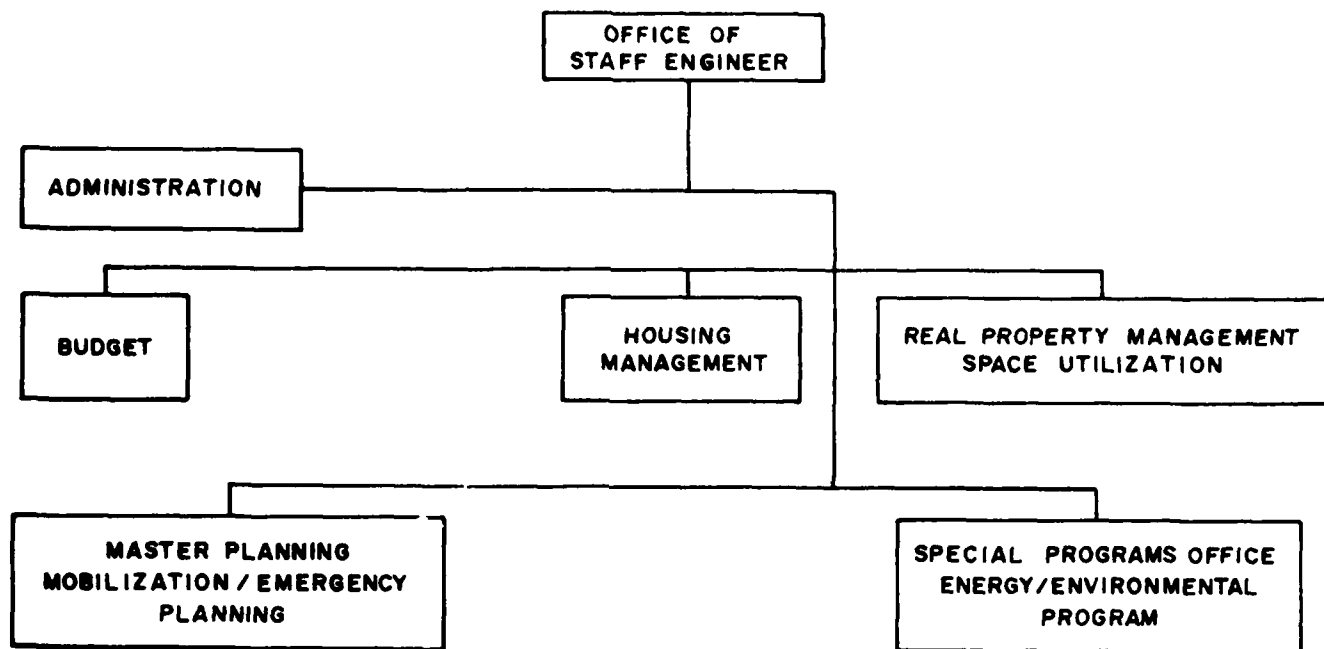


Figure 49. Typical installation Staff Engineer organization.

Real Property Maintenance Managers

Figure 50 shows the typical RPMM organization. Composition of the three branches will vary by installation, depending on the organization of the shop workforce. If a CITA contractor is performing the actual maintenance and repairs, the RPMM organization changes to one situated to follow the plan shown in Figure 51 with the emphasis being placed on quality assurance of contractor-performed work. Due to the remote location of Vint Hill Farms Station from USAEA,CA, the organization has been expanded to include a dedicated Work Reception Office.

Table 2 shows the RPMM Staffing, and reflects the size of the current management staff.

Tabl. 1

SE Organization Staffing
(Requirements/Authorization)

	<u>MDW</u>	<u>AHS</u>	<u>VHFS</u>	<u>HTC</u>	<u>Fort Belvoir</u>	<u>WRAMC</u>
Staff engineer	1/1	1/1	1/1	1/1	1/1	1/1
Administrative/clerical support	1/1	2/2	2/2	2/2	4/4	4/4
Accountability for real property/space utilization	3/2	1/1	1/1	1/1	3/3	2/2
Annual work plan	1/1	1/1	1/1	1/1	1/1	1/1
Environmental program/ fixed facilities energy program	2/*	1/*	0/*	1/*	1/1	1/*
Installation RPMA and FHMA program and budget	12/7	2/2	1/1	3/3	7/7	4/4
Management of family housing	44/42	--	8/8	--	28/26	--
Master planning	2/2	1/1	1/1	1/1	2/2	1/1
Mobilization/emergency planning	--	--	--	--	--	--
	—	—	—	—	—	—
Total	66/56	9/8	15/15	10/9	47/45	14/13

*Additional duty.

Table 2

RPMM Organization Staffing

	<u>Required</u>	<u>Authorized</u>
MDW	23	21
INSCOM	12	12
Fort Belvoir	8	8
WRAMC	7	7
DMAHTC	8	8
	—	—
	58	56

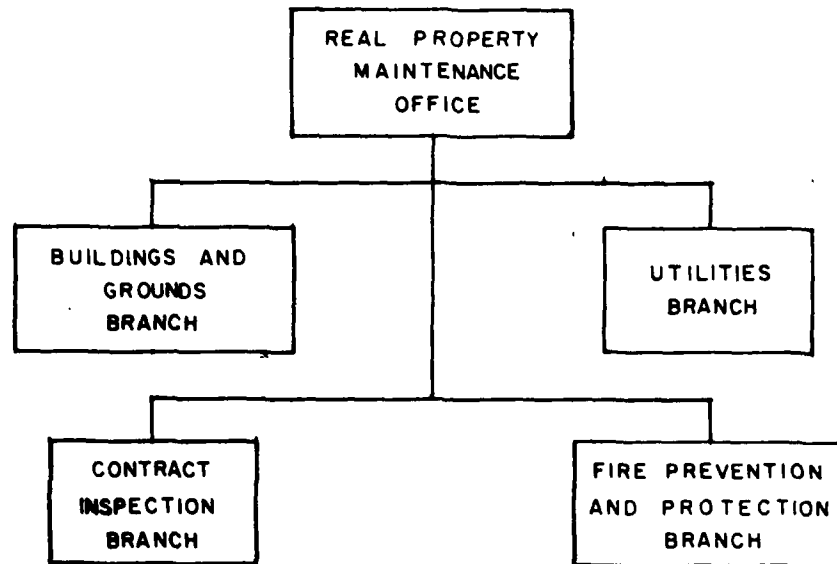


Figure 50. RPMM organization (typical).

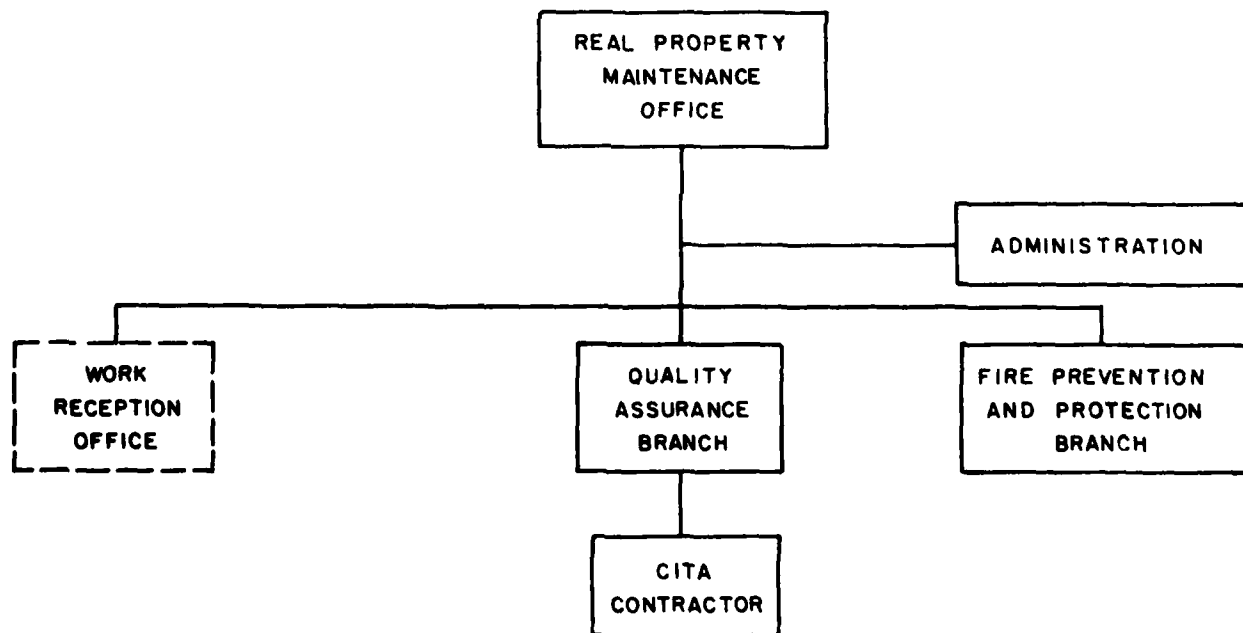


Figure 51. RPMM organization with CITA contractor.

9 CONSOLIDATION EVALUATION

Task

The consolidation will be evaluated to determine resource savings, both in manpower and dollars, resulting from centralization/consolidation.

Concept

An evaluation methodology will be developed and approved by all MACOMs and representatives of the affected installations. The methodology will outline a process for quantitatively describing the performance of the FE organization. The methodology will be based on simply defined factors to ensure comparability of evaluations made several years apart. A baseline description will be developed for each installation before consolidation. The affected installations will then be evaluated after consolidation using the same methodology. The consolidation schedule is phased to provide time to evaluate the performance of USAEA,CA at intermediate points and to change the schedule if the expected benefits are not apparent.

Subtasks

The following subtasks were accomplished:

1. Two groups were formed to represent the affected installations and impacted MACOMs in developing the evaluation methodology and the baseline description.
2. The detailed methodology was prepared and approved.
3. The baseline descriptions were developed.

Advisory Groups

The task of developing the evaluation methodology and the baseline descriptors was assigned to the Huntsville Division (HND) and then to the U.S. Army Construction Engineering Research Laboratory (CERL) for development. HND formed a Study Advisory Group of FEs to ensure command cooperation during the process and acceptance of the methodology.

CERL formed the Facilities Engineers Coordinating Group of FE staff personnel familiar with existing records and operations to ensure that the methodology would produce a representative description of the organization's performance and that the data needed would be available.

Approach

CERL developed a methodology which included both quantitative and qualitative factors that recognized both the quality of work being performed and

the volume of work being handled by the organization. Three major components were considered in the initial methodology:

1. Quantitative data taken from IFS or FE records describing units of work accomplished for the funds invested, using the available resources.
2. The quality of maintenance being provided or received, as perceived by the various groups measured by survey questionnaires.
3. A construction condition index to describe the relative condition of a sample number of buildings on each installation over the evaluation period.

The method requires the collection of data and development of a series of tables given in Figures 52 through 67. The tables compare and summarize the factors listed below. Directions for completing each table are provided in the methodology to clarify the intent and type of data expected.

- Overhead Rates
- Shop Costs
- Costs of Equipment Acquisition
- Distribution of Funding Sources
- Personnel
 - FE Performance Assessment by Installation Commander
 - FE Performance Assessment by Service Requestors
 - FE Performance Assessment by Family Housing Occupants
 - FE Performance Assessment by Workforce Service
- Service Order Performance by Shop
- Job Orders
- Analysis of Project Data or Contracts of More Than \$10,000
- FE Shop Productivity Analysis
- Summary of FE Measurement Categories
- Comparison of the Level of Maintenance Provided
- Comparison of the FE Organization and Its Activities

Sampling techniques were used to simplify the analysis of the massive amount of performance data available. Detailed sampling techniques given in Appendix I were used to collect data from four activities to ensure consistent results over time: (1) Service Orders, (2) Individual Job Orders, (3) Contract Administration, and (4) Standard Operation Orders. The survey questionnaires provided in Appendix H were developed and used to collect data on the perceived quality of work being performed.

HND developed the condition index system as an extension of the three-factor IFS Component Inspection System. A detailed narrative was provided to describe each condition level. Work was initiated to survey facilities, but terminated by OCE before completion. While there were several questions pertaining to the sensitivity of the condition index to actual conditions, its repeatability, and the sampling technique which could have been addressed, the effort was terminated on the basis that the apparent condition of facilities is more a reflection of how the Installation Command sets priorities for completing funding requirements and the total budget, rather than the performance of the DEH organization.

One measure of efficiency of an engineering organization is the overhead rate. In this evaluation, the pre-consolidation overhead rates will be compared to the current consolidation EA,CA overhead rates. Existing reports cannot be used directly, since the EA,CA overhead rate includes FE administrative overhead costs, as well as general and administrative (G&A) overhead expenses. (G&A overhead costs are those post expenses attributed to support of the FE.) Since EA,CA must reimburse the installation for any support the installation provides, these costs are included in the EA,CA shop rate. In FY79, the reported FE overhead rates included only shop supervision expenses. Thus, to make a comparison, the "total" FY79 FE overhead rate must be estimated using EA,CA cost techniques. This is done by including installation support costs and FE administrative overhead costs within the overhead calculation. After adjusting for differences in time, a direct comparison can be made. The pre-consolidation installation support functions identified by EA,CA were costed.

BASELINE			EA,CA		
OH Contribution to Shop Rate*	\$	%OH	OH Contribution to Shop Rate	\$	%OH
FE (Total Expense Less Shop)			EA,CA Incl: Real Property Maintenance Manager (RPM) Supply		
Centrally Performed Functions			Centrally Performed Functions		
Supply (instl)					
CPO (instl)			CPO (OCE)		
F&A (instl)			F&A (Baltimore)		
Payroll (instl)			Payroll (Omaha)		
SJA					
MISO					
Procurement (instl)			Procurement (Baltimore)		
Shop			Shop		
			Staff Engineer		
			TOTAL OH Expense %		

*Note: Before consolidation, only shop OH was included in shop rate. If the below actual costs are added to the reported baseline shop rate, a direct comparison with EA,CA shop rate can be made.

Figure 52. Comparison of actual installation overhead rates to EA,CA reimbursable rates.

Data Elements Required

ELEMENT	SOURCE	COMMENT
Personnel	Authorized TDA FE Tech Data Report STANFINS Leave Reports Overtime Reports	Collect the following: position title grade/step Soc. Sec. Number Hourly wage or salary Total hours worked Productive manhours
Supplies	FE account total at Instl. Self Service Supply Center	Collect the following: Total \$ amount for shops Total \$ amount for FE offices
Equipment	FE Tech Data Report additions to FE Real Property Book	Collect the following: \$ expenditures for shops \$ expenditures for offices
Fuel Costs	FE Tech Data Report DEIS-1, II Report	
TDY/Transportation	FE Budget Ofc. DCSRM FE Account Records	
Training	FE Budget Ofc.	
Rents/Contracts ADP Support		
Centrally Performed Functions	Interviews with office chiefs U.S. Army Garrison Staffing Guides	Support for each indicated activity should be calculated by several different methods

Figure 52. (Cont'd).

Differences in overhead rates are clearly shown by comparing individual shop rates. A direct comparison cannot be made between the reported preconsolidated shop rates and the EA,CA shop rates, since EA,CA rates are more inclusive and reflect the total cost of RPMA. Thus, an equivalent total cost shop rate for the preconsolidated shops must be calculated. This can be done on Figure 53 by using the information from Figure 52.

SHOP CODE	COMPARISON OF SHOP COSTS FOR FY					EA, CA EA, CA SHOP RATE (\$/HR)
	(INSTALLATION)					
	BASELINE SHOP* COST (\$/HR)	+	BASELINE TOTAL COST PER SHOP HOUR FE OVHD (\$/HR) (From Figure 52)	=	TOTAL FY COST	
Bldg Maint						
Rds, GNDS & Mbl Equip						
Ref & Aircond						
Plumb & Staffg						
Electrical Pymt Maint						
Paint Shop						
Carp & Mason						
Metal Work						
Boiler Plant Ops						
AVERAGE SHOP COST						

*Baseline shop costs and FE overhead must be adjusted to current labor rates. The inflation factor is 1+ all wage increases between the baseline year and the comparison year.

Figure 53. Comparison of shop costs.

One of the benefits that may be realized from an FE consolidation is a reduction in the number of required equipment and greater use of equipment on hand. This reduction may not occur if the combined workload is large enough to justify the purchase of specialized equipment. To identify the impact of consolidation on equipment, the changes in requirements for two types of equipment will be noted: maintenance and service (M&S) equipment and ADP equipment. Measurements of equipment requirements will include the number, cost, and lease expense of M&S equipment as well as ADP systems.

Equipment Type	Baseline Total			EA, CA		
	Number	\$ Replace/value	\$ Lease cost/yr	Number	\$ Replace/value	\$ Lease cost/yr
M&S Equipment						
ADP Equipment						
TOTALS						

Figure 54. Cost of equipment acquisition (replacement value and annual lease).

Data Elements Required

ELEMENT	SOURCE	COMMENT
M&S Equipment	Supply Officer	List of equipment on hand at the end of FY79. List of M&S equipment. Total \$ Value
ADP Equipment	Supply Officer	Refers to ADP equipment on hand during FY79. Description of system, components. Total & Value
Leased/Rent Equipment		List of equipment in any of above categories (M&S or ADP) leased/rented. \$ value of lease/rent
Utilization Data	IFS Equipment Utilization Report (AK3015) or equipment log books	For M&S equip (each piece, if possible), hrs used/year or % utilization for year

Figure 54. (Cont'd).

Changes in FE fund obligations and/or sources of funding can help identify changes in fund availability or whether operations and maintenance emphasis has shifted. Examining these changes in funding will help determine changes in costs, FE performance, or condition of real property. The information for this table should be obtained from the FE Technical Data Report (DA Form 2788) and budget documents used to prepare the FE Technical Data Report.

<u>PHASE FE OBLIGATION COMPARISON</u> <u>Baseline vs. EA,CA</u> <u>(INSTALLATION)</u>						
<u>SOURCE OF FE FUNDS</u>	<u>BASELINE</u>		<u>EA,CA</u>		<u>% Change</u>	
	<u>% Direct</u>	<u>% Reimbursable</u>	<u>% Direct</u>	<u>% Reimbursable</u>	<u>Direct</u>	<u>Reimbursable</u>
J						
K						
L						
M						
FH						
TOTALS						

Figure 55. FE obligation comparison.

PERSONNEL COMPARISON

३५

Supply
CPO
F&A
Procure

CPO (OCE)
F&A (Baltimore) and Payroll (OMAHA)
Procurement (Baltimore)

Staff Engineer

TOTAL FTE

Figure 56. Personnel comparison.

The responsiveness of an FE can be measured by interviews with users and providers of FE services (Figures 57 through 60).

Detailed surveys were administered to Post Commanders (Figure 57), installation FE service requesters (Figure 58), Family Housing occupants (Figure 60), and the actual FE workforce (Figure 60). The first three questionnaires judge the FE performance from a customer point of view, while the last one measures perceived responsiveness from within the organization. These questionnaires were administered in FY81 to establish the FE performance before consolidation (MDW questionnaires were administered at the beginning of FY81 before EA,CA performance affected the results). Surveys will be repeated before each decision point to proceed with Phase II and Phase III and after the completion of Phase III. The survey results will compare the perception of FE service at each installation before and after consolidation. This information will be used to evaluate the effect on responsiveness of consolidating. The percentage change will be statistically reviewed to ensure its reliability.

FE PERFORMANCE ASSESSMENT BY INSTALLATION COMMANDER			
AT: _____ (INSTALLATION)			
FE FUNCTION	ASSESSMENT OF BASELINE (FY)	ASSESSMENT OF EA,CA (FY)	CHANGE
.PLANNING	% Satisfied		
.RESPONSIVENESS	% Satisfied		
.QUALITY	% Satisfied		
.COST	% Satisfied		
.CONDITION OF FACILITIES	% Satisfied		
.OVERALL PERFORMANCE	% Satisfied		

Figure 57. FE performance assessment by installation commander.

FE PERFORMANCE ASSESSMENT BY SERVICE REQUESTORS AT: _____			
(INSTALLATION)			
FE FUNCTION	ASSESSMENT OF BASELINE (FY)	ASSESSMENT OF EA, CA (FY)	CHANGE
.WORK RECEPTION	✓ Satisfied		
.RESPONSIVENESS	✓ Satisfied		
.WORK PERFORMANCE	✓ Satisfied		
.COMMUNICATION	✓ Satisfied		
.CONDITION OF FACILITIES	✓ Satisfied		
.OVERALL PERFORMANCE	✓ Satisfied		

Figure 58. FE performance assessment by service requesters.

FE PERFORMANCE ASSESSMENT
FAMILY HOUSING OCCUPANTS
AT:

(INSTALLATION)

FE PERFORMANCE MEASURE	ASSESSMENT OF BASELINE (FY)	ASSESSMENT OF EA, CA (FY)	CHANGE
.WORK RECEPTION	% Satisfied		
.RESPONSIVENESS	% Satisfied		
.WORK PERFORMANCE	% Satisfied		
.COMMUNICATION	% Satisfied		
.CONDITION OF FACILITIES	% Satisfied		
.OVERALL PERFORMANCE	% Satisfied		

Figure 59. FE performance assessment by Family Housing occupants.

<u>FE PERFORMANCE MEASURE</u>	<u>FE PERFORMANCE ASSESSMENT BY WORKFORCE FOR</u>		<u>CHANGE</u>
	<u>(INSTALLATION)</u>		
	<u>ASSESSMENT OF BASELINE (FY)</u>	<u>ASSESSMENT OF EA,CA (FY)</u>	
<u>.PLANNING & SCHEDULING</u>	X Satisfied		
<u>.COMMUNICATION</u>	X Satisfied		
<u>.SUPERVISION</u>	X Satisfied		
<u>.QUALITY OF WORK</u>	X Satisfied		
<u>OVERALL PERFORMANCE</u>	X Satisfied		

Figure 60. FE performance assessment by workforce.

An FE's ability to complete Service Orders (SOs) within preestablished response limits is a good measure of responsiveness. Figure 61 will present a shop-by-shop comparison of preconsolidation organization performance versus EA,CA performance. The average percent response by priority will provide an overall organization responsiveness indicator.

SHOP	On-time ⁽¹⁾ SERVICE ORDER PERFORMANCE BY SHOP FOR <u>(INSTALLATION)</u> BASELINE VS. EA,CA PERFORMANCE BY PRIORITY OF WORK					
	PRIORITY 1		PRIORITY 2		PRIORITY 3	
	<u>Baseline</u>	<u>EA,CA⁽²⁾</u>	<u>Baseline</u>	<u>EA,CA⁽²⁾</u>	<u>Baseline</u>	<u>EA,CA⁽²⁾</u>

AVERAGE

Notes:

- (1) "On-time" refers to standard completion time required for assigned priority.
- (2) The impact of the change in SO definition from 16 manhours to 40 manhours has been reviewed.

Figure 61. On-time service order performance by shop.

The effectiveness of internal processing of work orders is also an important measure of FE performance. Data in Figure 62 provide an opportunity to measure FE work order processing performance. The percentage of JOR converted to IJO could provide a measure of the degree to which incoming work is reviewed. On the other hand, EA,CA will receive work that has already been reviewed by the Staff Engineer and approved for work. Thus, it is to be expected that this percentage would be higher for EA,CA. Interpretation of the change is hard to anticipate at this time. Job order administrative processing time is also measured in Figure 62. Average time for completion of each processing step is recorded for a 16 percent sample.

<u>JOB ORDER COMPARISON</u>				
<u>Job Order Measure</u>	<u>Units</u>	<u>BASELINE</u>	<u>EA,CA</u>	<u>Difference EA,CA - Baseline</u>
Number of JORs				
Number of IJOs				
ZJOR to IJO				
Job Order Processing Time:				
-JOR to approval				
-approval to planning/estimating				
-estimating to matl coord.				
-matl coord. to scheduling				
-scheduling to shop				
-planning/estimating to P&C*				
*Small purchase order jobs				
		<u>BASELINE</u>		
		<u>MDW</u>	<u>INSCOM</u>	<u>Ft. Belvoir</u>
			<u>WRAMC</u>	<u>DMAHTC</u>
				<u>AVE</u>
				<u>EA,CA</u>
				<u>DIFFERENCE</u>

Figure 62. Job order comparison.

The effectiveness of the in-house design process or procurement process for out-of-house design is another measure of FE performance. A 100 percent sample of projects of more than \$10,000 completed in FY79 is made.

Indicator	Over \$10,000 Contract Project Data Analysis for			(INSTALLATION)		
	In-House			District/AE		
	Baseline	EA, CA	% change	Baseline	EA, CA	% change
-number of projects						
-\$value of projects						
-average project cost						
-average calendar days from funding approval to procurement submission						
-procurement to contract award						
-average design calendar days						
-S&A as a % of project cost						

Figure 63. Over \$10,000 contract project data analysis.

The actual performance of the FE shops against accepted standards is an excellent measure of shop (FE) productivity. The standard establishes a basis of the scope of the work completed and also what resources should be required to complete the job. A greater use of the FE standards (Engineering Performance Standards - EPS) in estimating work should help provide a more efficient resource scheduling, as well as a better means of measuring performance. Average values for Figure 64 entries can be calculated from the data collected during the IJO Sampling.

Figures 65, 66, and 67 summarize data contained in the preceding figures. However, SOO information is also included.

FE SHOP PRODUCTIVITY ANALYSIS FOR: _____ (INSTALLATION)			
PRODUCTIVITY MEASURE		EA, CA	% CHANGE
AVERAGE % USE OF EPS			
PRODUCTIVITY INDEX (ACTUAL TIME/EPS TIME)			
SHOP			

Figure 64. FE shop productivity analysis.

SUMMARY OF FE MEASUREMENT CATEGORIES

COMPARISON	BASELINE				EA, CA	DIFF
	MDW	INSCOM	FT. BELVOIR	WRAHC	DMAHTC	AVE
Resource Requirements						
<u>Cost</u>						
.Total Overhead						
.Ave Shop Cost/Hr						
.Cost of acquisition and lease of M&S & ADP Equipment						
.Total Cost (FY __ \$)						
<u>Manpower</u>						
.FTE Requirement						
Performance						
<u>Responsiveness</u>						
.Service Users Assessment						
.SO Completed "on time"						
.IJO ADM Processing Time						
<u>Productivity</u>						
.Average Design Time						
.Use of EPS						
.Performance as a % of EPS						

Figure 65. Summary of FE management categories.

DATA ELEMENT	COMPARISON OF THE LEVEL OF MAINTENANCE PROVIDED		
	<u>FY BASELINE</u>	<u>FY EA, CA</u>	<u>Z CHANGE</u>
NO. OF SO's	—	—	—
AVERAGE \$ VALUE	—	—	—
NO. OF IJO's	—	—	—
AVERAGE \$ VALUE	—	—	—
NO. OF SOO's	—	—	—
AVERAGE \$ VALUE	—	—	—
NO. OF CONTRACTS	—	—	—
AVERAGE \$ VALUE	—	—	—
QUAL OF SERVS (Weighted Ave based on Interviews)	—	—	—
MDW			
INSCOM			
FT. BELVOIR			
WRAHC			
DMAHTC			

Figure 66. Comparison of the level of maintenance provided.

COMPARISON OF THE FE
ORGANIZATION AND ITS ACTIVITIES

DATA ELEMENT	(WTD. AVE. FOR PARTICIPATING INSTALLATIONS)	EA, CA	DIFFERENCE
BUDGET			
OVERHEAD RATE (TOTAL)			
SHOP COSTS (AVERAGE)			
SO COMPLETION TIME			
IJO ADM PROCESS TIME			
AVERAGE PROJECT DESIGN TIME			
- IN-HOUSE			
- DISTRICT			
SHOP PERFORMANCE/EPG			
FTE # OF PERSONNEL			

Figure 67. Comparison of the FE organization and its activities.

The methodology evolved into a technique for comparing organizational performance using several factors and reducing the detailed comparisons to a small number of easily handled comparisons. The methodology does not recommend a course of action or provide a basis for comparing the performance of several organizations. Some consideration was given to developing a weighting system that could be used to maintain the predetermined relative importance of each evaluation factor in the final analysis. Weighting systems can be beneficial when there is a consensus about the relative value of the derived performance parameters, and the decision algorithm can be stated exclusively in terms of the selected factors. Weighting systems also tend to lead reviewers to numerically rate organizations and feel that one organization is better than another, which may not be true. However, it was realized that the decision to continue the consolidation would be based on more factors than the performance indications quantified in this evaluation and that it would be impossible to develop an acceptable decision algorithm; therefore, the weighting concept was rejected as being unnecessary and perhaps counterproductive.

Appendix B, Task G, gives the detailed plan for accomplishing the methodology development and baselining. The work started on 1 June 1980 with the following major milestone dates.

1. The questionnaire survey of MDW sites would be completed by 1 October 1980.
2. The evaluation methodology would be completed and presented to the SAG by mid-December 1980.
3. USAEA, CA operations would be evaluated immediately before consolidating Phase II and III installations.

Data Collection

Survey questionnaires, Appendix I, were completed using the following methods:

1. Installation Commander questionnaires were completed by survey personnel during an interview with each Commander.
2. A small sample of Family Housing occupants was contacted and interviewed to collect data. All other occupants received questionnaires through the mail. General officers were excluded from the survey. Responses were monitored and follow-up action taken to achieve an acceptable level of survey response.
3. Survey personnel briefed FE personnel in special mass meetings to explain the purpose of the questionnaire, read and explained each question, and provided time during the meeting for everyone to complete the questionnaire. Special assistance was provided on an individual basis if needed.
4. Questionnaires were mailed to service requesters.

Data were collected from the files and registers to quantify the workload. However, there were problems because many records were incomplete, and some of the handwritten entries were illegible. The Army Audit Agency (AAA) validation of the data became a problem, and additional samples of the data had to be taken.

Functions currently under CITA contract or to be contracted out during the consolidation period will be dropped from consideration during the evaluation process. However, both baseline and consolidation performance data will be collected. Use of these data will be limited to direct comparisons of selected factors over time.

The baseline year for all installations was FY79. Baseline data were collected for FY79 and the first half of FY80. The intent was to baseline operations before any turbulence in the organization from pending consolidation could impact performance. In some cases, installations were undergoing CITA review and baselining during the same period, and FE employees were finding employment elsewhere. Instructions were not given to the installations early enough, and some FY79 records were no longer available because they had been retired or destroyed.

Training

HND was made responsible for evaluating USAEA,CA performance in the future using the developed methodology and baseline data. HND personnel participated in the development of the baseline descriptions for MDW, INSCOM, and DMA for training purposes. HND personnel developed the baseline descriptions for Fort Belvoir and WRAMC.

Reports

The evaluation methodology and the baseline reports for all installations have been documented in the following unpublished reports prepared by Huntsville Division.

1. Comparison Methodology for Evaluating Facility Engineering Consolidation in the National Capital Region, April 1981.
2. National Capital Region Facility Engineer Consolidation Study, Military District of Washington: FY79 Baseline Evaluation, March 1983.
3. National Capital Region, FE Consolidation, Military District of Washington, Service Requestor Resurvey, April 1982.
4. National Capital Region, FE Consolidation Study, Vint Hill Farms Station and Arlington Hall Station, FY79 Baseline Evaluation, November 1981.
5. National Capital Region Facility Engineer Consolidation Study, Walter Reed Army Medical Center, FY79 Evaluation, April 1982.
6. National Capital Region, Facility Engineer Consolidation Study, Fort Belvoir, Virginia, FY79 Evaluation, May 1982.

10 CONSOLIDATION PLANNING

Task

This chapter discusses several of the problems encountered by the IPG and provides alternative approaches for consideration in future consolidations.

Project Development

Not enough effort was invested in project planning and guidance development before the IPG was chartered. There was too much confidence that the IPG could easily solve all problems. As the IPG began operations, problems arose that could have been solved much more efficiently by the original planners. Although these problems were solved by IPG members, some lost effort and delays resulted.

The IPG membership was not generally selected on the basis of identified needs and their unique expertise. Consequently, some members had little advance warning and were unprepared. IPG members at Fort McNair were given the responsibility of developing the appropriate plans to support activation of the USAEA,CA on 1 October 1980. No one in the group had any experience in developing such plans and most had little understanding of DEH operations. Implementation planning was redefined to include planning and executing all actions needed to ensure successful activation of the USAEA,CA. Members first had to develop an understanding of DEH activities and what was really expected of them before they could begin.

Several activities should be initiated before chartering an IPG to ensure the availability of accurate, consistent data. If there is a need to evaluate the benefits of the proposed consolidation, then specific objectives should be developed and guidance furnished for the affected installations to preserve needed records. Since the evaluation methodology is now available, initiation of baselining activities need not be constrained by development of the IPG.

IPG Members

Project guidance should specify the organizations responsible for providing IPG members and briefly describe their training or experience requirements. The Supporting District should provide members to help plan the transfer of support functions from the existing organizations to the District, and to develop the processes to be used by the District to support the proposed consolidation organization. Members should be drawn from the organizations involved in the consolidation effort, so their knowledge of the existing workload and processes can be used. Members should also be drawn from the OCE for their expertise in Army policy, existing systems, and procedures. Special tasks not requiring full-time IPG membership should be assigned to FESA and USACE laboratories with the needed experience.

While IPG members are usually highly skilled in their own areas of expertise and well motivated, they may not have a good understanding of FE operations and governing regulations. Organizations planning a consolidation IPG

should provide a series of orientation briefings covering all aspects of FE activities, the current mode of operations at the candidate installations, the information or data already available, and information available from prior consolidation activities. Such briefings could prevent loss of time and could reduce the number of repetitive questions asked of existing FE organizations.

Project Guidance

Project guidance should describe the basic operations of the proposed organization and identify the organizations responsible for furnishing civilian personnel, procurement, financial, and other support functions. If these items are not included in the guidance, the IPG may spend time evaluating alternatives and forming recommendations that the sponsoring agency does not need.

OCE and IPG personnel should jointly develop an outline of all major tasks for the IPG to accomplish. This approach could ensure that both OCE and IPG expertise and expectations are reflected in the plan and that the IPG members fully understand the project guidance. In jointly laying out the work to be done, there may be tasks that should be handled by OCE personnel, rather than the IPG.

The CPM networks contained in Appendix B should be used as a starting point for planning the activities of future IPGs.

Pre-IPG Activities

Participating installations should have been directed through command channels to take the following actions in preparation for the IPG activities:

1. Upgrade their organization charts, TDAs (including equipment TDAs), and personnel lists (DD Form 207).
2. Place a freeze on all updated TDAs and accept no further changes unless specifically approved by the headquarters responsible for the consolidation. This action is needed to prevent migration of personnel spaces out of organizational elements to be impacted in the consolidation.
3. Have a manpower survey made.
4. Schedule the completion of all pending personnel actions prior to consolidation.

Command Support and Staffing

Success of the IPG depends heavily on gaining enough command attention and support to (1) get the personnel needed, (2) have personnel temporarily assigned for the duration of IPG activities with minimum interference from home office demands, (3) get timely decisions, and (4) ensure cooperation from all commands involved in the consolidation. Organizations involved in the consolidation (in addition to IPG members, OCE, and USACE field operating

agencies) should provide the temporary technical assistance needed to ensure that all factors are adequately considered in developing operating procedures, and that decisions are based on all available information.

IPG activities were hampered by the lack of in-depth command support. The Steering Committee was generally helpful, but unable to provide the emphasis needed to support the IPG. This problem was apparent in three general areas: (1) the USACE was committed to making the implementation a success, but the IPG was unable to retain its USACE members throughout the planning period due to higher priority work elsewhere; (2) the IPG operated on a very tight schedule, but the process for getting decisions and guidance was prolonged; and (3) the Steering Committee was unable to get USAMSSA to participate in the IFS/COEMIS system test, so the system was implemented without full validation. While this is primarily a command problem, the impact could have been reduced with better pre-IPG planning and by scheduling the work to allow key personnel to be more productive.

Consideration should be given in future consolidation efforts to forming the IPG as a DA Task Force. At this level of assignment, the IPG could achieve the essential combined support and retain IPG members throughout the development period. In addition, the IPG and the test unit (USAEA,CA) should be exempted from other consolidation efforts such as the Joint Interservice Resource Study Group (JIRSG), the Defense Retail Interservice Support (DRIS) Program, the Army Performance-Oriented Review System (APORS) including the use of the Manpower Allocation and Requirements Methodology (MARM), Commercial Activities (CA) program, and others. Responding to the requirements of these efforts tend to invalidate test results by placing an unexpected workload on IPG members and change the mode of operations.

CPM Networks

CPM networks for individual tasks (Appendix B) should be incorporated into an integrated network and all interrelationships checked. Using the integrated network will prevent scheduling activities on one network before scheduled completion of supporting activities on other networks, or before a decision that has to be made appears on networks for other tasks. Recognizing such constraints early in the development period will allow planners to develop alternate methods to minimize possible schedule slippage.

In developing schedules, planners must recognize that transition tasks must be considered in the flow of activities between planning and operating a consolidation organization. These tasks include training new personnel, introducing new systems and procedures, and forming operating teams.

Key decisions should be identified in the CPM networks and adequate time allowed for management to react after the supporting rationale and data have been developed and submitted. On the other hand, management should recognize the importance of timely decisions in the IPG process.

The networks contained in Appendix B reflect the lessons learned in identifying decisions that are needed and when, detailed tasks to be accomplished, items to be coordinated, and approvals to be requested. The networks do not show how the work was actually done.

Detailed Process Flowcharts

The IPG recognized the problem of forming a new unit with personnel from various organizations having their own unique ways of operating, as well as the need for the USAEA,CA to be fully operational as quickly as possible. Since very few IPG members were to become part of the new organization, there was a transition step between disbanding the IPG in September and the time when the new employees could efficiently implement the planning. To simplify the transition the IPG developed the detailed flowcharts given in Appendices C, D, F, G, and H. These flowcharts also helped define the duties of the ISE and RPMM, since they made it possible to review the individual processes. The same flowcharting technique was used to diagram the work request flow shown in Figure 68 (explanatory narrative in Appendix L). The technique proved to be very useful for communications, examining internal work flow, and designing process improvements.

Alternate Approaches to Consolidation

Consolidated RPMA organizations can be planned which can assume responsibilities in increments (by installation or in a single step). For example, the NCR organization will assume responsibilities in three steps. On the other hand, the SARPMA organization uses the single-step method. Since both methods have merit, the following factors should be considered in planning subsequent consolidation activities.

Incremental Consolidation

This approach provides the time needed for an entirely new CE organization to grow and develop over an extended period. USAEA,CA is a unique organization, and its operating procedures are a mixture of those used in USACE Division/District and FE organizations. Interfaces had to be developed between existing computer-oriented management systems.

The approach minimizes the time required to implement the USAEA,CA. The new USAEA,CA organization was established and assumed the responsibilities for RPMA in MDW in 9 months. Implementation time tends to increase with the number of sites involved.

Incremental consolidation also minimizes the total effort needed to plan the implementation process. The IPG for the NCR consolidation prepared for Phase Ia with a maximum full-time strength of 14 (plus part-time assistance) over less than 9 months. The USAEA,CA contains a small cadre responsible for plans related to sites that will be added later.

Consolidating the minimum number of installations during the first phase minimizes the risk involved. NCR consolidation is a test, and the performance of USAEA,CA will be evaluated at the end of Phases I and II to see whether the next phase should be implemented. USAEA,CA operations will also be evaluated after the start of Phase III to decide whether consolidated RPMA activities are more efficient than dedicated activities on each site, and whether consolidation should be considered in other areas. If it appears that the USAEA,CA is not cost-effective, or cannot provide equal maintenance for the

same cost, decisions could be made to delay future consolidation to give USAEA,CA more time to prove its effectiveness, or to make plans to eliminate consolidation of other installations.

This approach maximizes movement of personnel, which detracts from the overall efficiency of the RPMA organizations. Personnel in the FE organizations that are being consolidated compete for jobs in the new organization. As each phase begins, employees in the consolidated organization (except the workforce actually doing maintenance) face the possibility of being bumped by personnel with higher retention ratings. As employees are introduced into the new organization, other operational losses may occur due to training and re-forming operating teams. In addition, key personnel from organizations to be consolidated in the future may apply for and be selected for jobs in the new organization. This places the losing organization in the position of trying (1) to maintain operational effectiveness, and (2) to fill key positions which may be abolished by consolidation in the near future.

Single-Step Consolidation

This approach minimizes movement of personnel, since all changes are made during the same period of time. Although it requires a longer, more intensive planning period, it is the most efficient consolidation method, since the organization is not faced with periodic disruption; all major changes occur at the same time. This method should be used, when there are no requirements for evaluating performance by phases, to decide on the advisability of incorporating additional sites.

Alternate Approaches to Forming IPGs

Rather than forming the multidisciplinary IPG at one time, it may be more efficient to organize the group in two phases. In the first phase, a small group could (1) develop general concepts and procedures, the Mission and Function Statement, the initial TDA, and criteria for the planning activities; (2) collect background information; (3) prepare for orientation briefings; (4) determine conceptually how financial, supply, and procurement support will be provided; and (5) develop plans for the activities for phase two. Ideally, the first phase should be handled by personnel who will have permanent positions in the new organization. Phase two would require a much larger group than phase one, but ideally, the core of the group should be personnel who will be taking permanent positions in the new organization. The second phase should include development of the detailed management plans needed to form and operate the new consolidated organization. While part of this work can be done during phase one activities, very little real progress can be made until the Mission and Function Statement and the TDA are completed. These phases should be considered, regardless of whether the work is to be done by a temporarily formed group or by some group that will form the new consolidated RPMA organization.

The following advantages for using a small cadre during the first phase should be considered:

1. The group could attract the best qualified personnel, regardless of grade and without a long-term obligation of personnel.

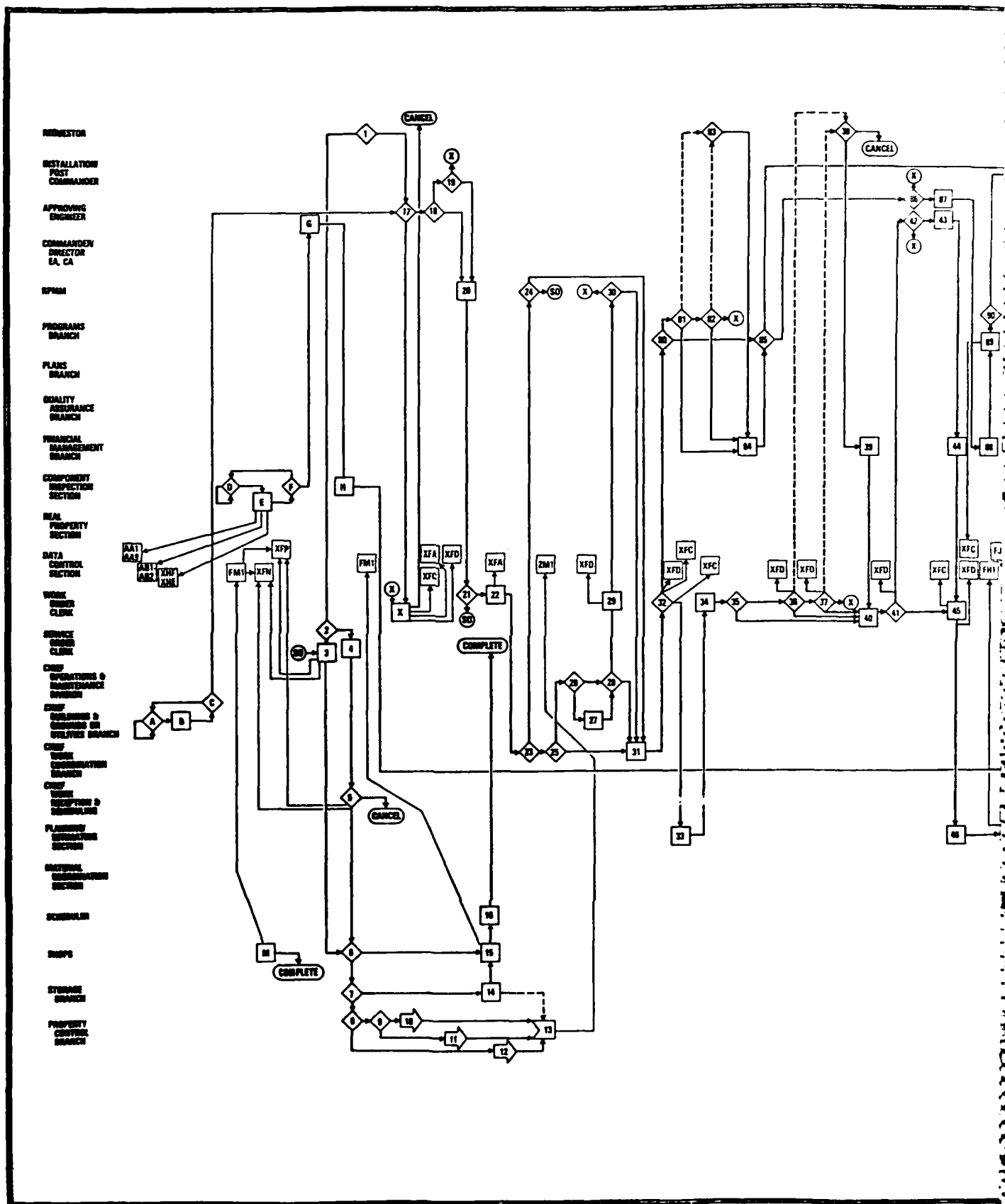
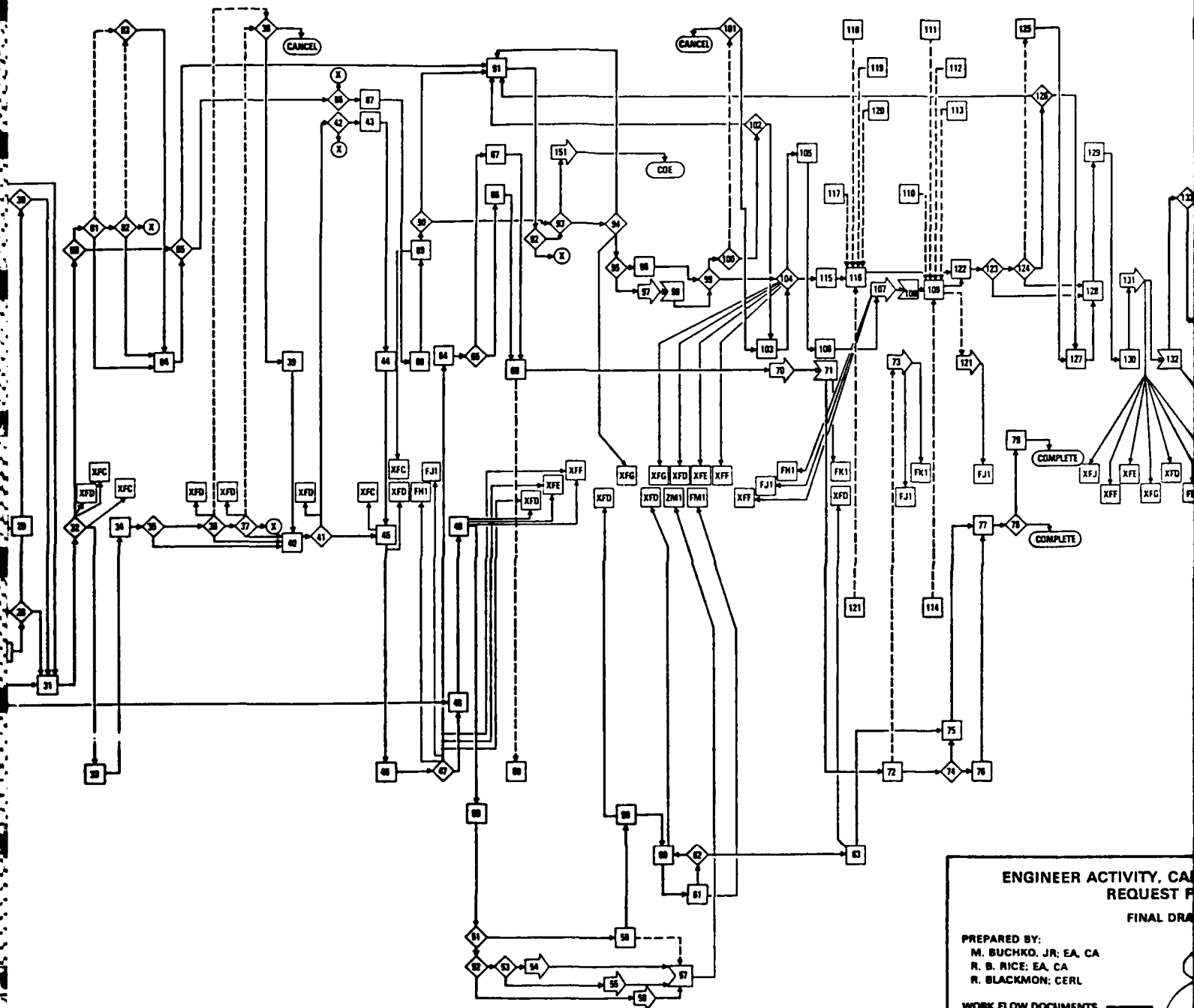


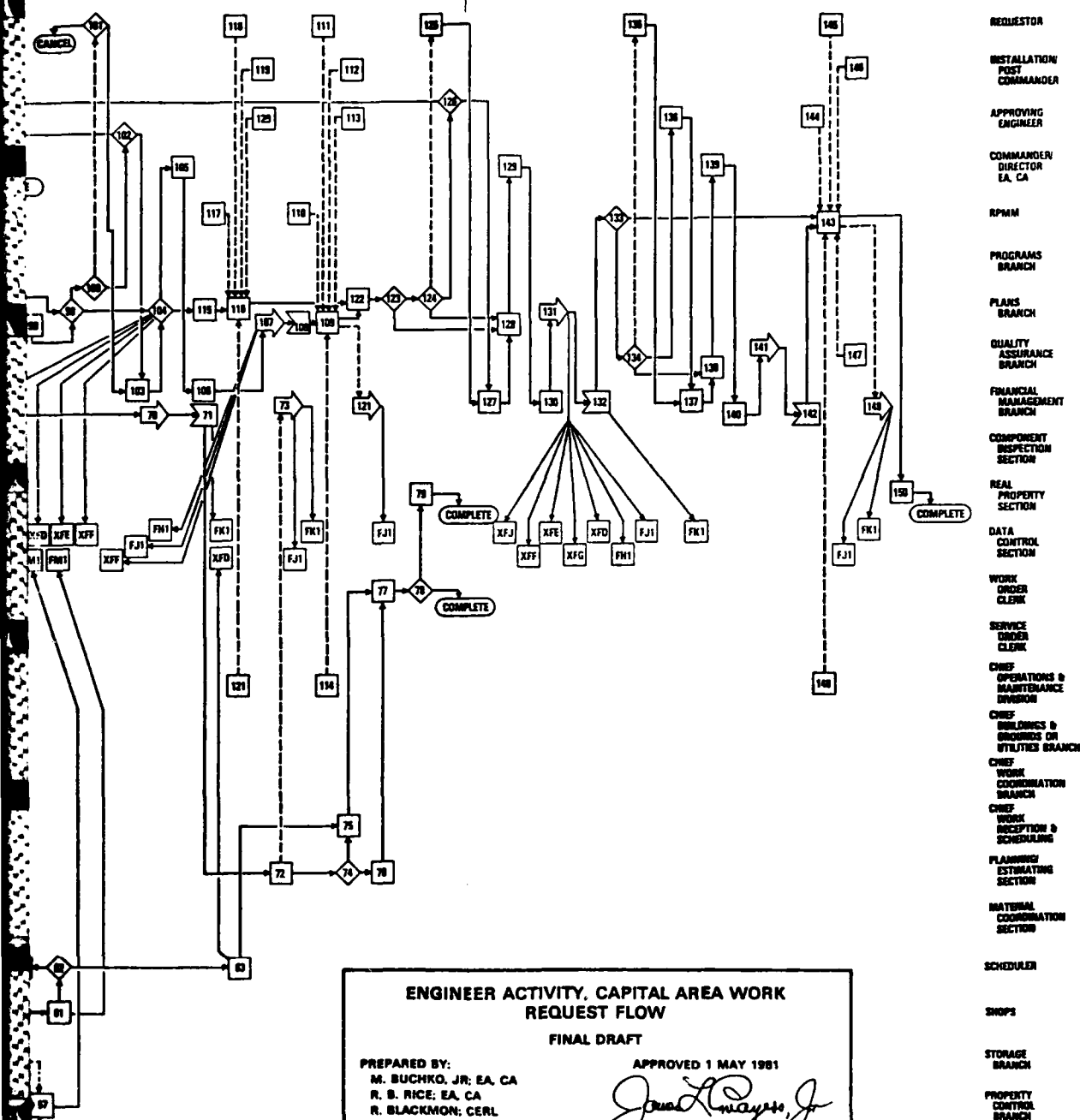
Figure 68. Work request flow.



ENGINEER ACTIVITY, CA REQUEST P
FINAL DRA

PREPARED BY:
 M. BUCHKO, JR. EA, CA
 R. B. RICE: EA, CA
 R. BLACKMON: CERL

WORK FLOW DOCUMENTS ———
 SUPPORTING DOCUMENTS - - - -
 IFS TRANSACTIONS



2. Extensive use can be made of outside expertise and advisory panels.
3. The cadre would be forced to complete and document all tasks before the implementation date. Personnel cannot depend on carrying activities over into the transition period.
4. Group members would be better able to get support from their parent organizations to accomplish the larger tasks. Resources available to the parent organization are usually made available to its group member.
5. Early cost is minimized.
6. The group can bring personnel on-board as they are needed.

The following disadvantages can be expected from using personnel on temporary loan to form an IPG and should be considered:

1. To minimize effects on their own work, support organizations may not assign their best personnel to the group.
2. Employees may be subjected to pressure to return to their parent organization or to work part-time rather than full-time.
3. If part-time employees are involved, competing priorities may be handled inefficiently.
4. IPG members returning to their own organizations after an absence of 9 months or more may find their situations drastically changed and may have to re-establish themselves in the organization.
5. Such members have no responsibilities for executing the plans or assisting in correcting problems that may arise.
6. There may be a period of time between losing the IPG planners and getting their full-time counterparts on board. Problems which arise during this period are difficult to handle.
7. Full-time employees in the consolidation organization may have had very little input to the planning and may not accept or understand it. There should be a transition period during which the planners assist the new employees to reduce additional learning losses.
8. Experience gained during the planning period is lost when group members return to their organizations.

Establishing a Working Organization

IPG participants should establish a good working organization as quickly as possible. Having participants with experience in the area of specialization is the key to developing a comprehensive implementation plan; these individuals should be able to outline the detailed tasks to be accomplished.



The planning group should closely coordinate activities with its parent organizations. Parent organizations to be involved in the consolidated organization have a special interest in developing plans which could affect their future operations. The wealth of knowledge and experience available in the parent organizations should be used either through consultation and review of developed material, or part-time direct participation in individual tasks.

The role of the command structure needs to be recognized early, and its impact on team activities reflected in all planning. Team leaders should expect to provide frequent briefings to keep commanders informed or to satisfy a requirement from the IPG Director. This method of information exchange should include both Installation Commanders and members of their staffs. A POC at the appropriate working level can be of value to the team.

All guidance and decisions should be reduced to written documents for filing. Trip reports and memorandums for the record (MFRs) should be used to record much of the information/guidance collected daily. Desk files should be maintained to keep a complete record of all transactions.

Successful IPG operations require group members to coordinate their actions frequently. This will help avoid duplication of effort, ensure a good flow of information across teams, and recognize the experience of others in developing team activities.

The IPG should strive to develop a system that provides better service than is currently being received by the FEs. The groups should not be reluctant to recommend something different. Consolidated organizations are new in USACE, and accepted procedures may not be the best way to provide the needed services or support. New ideas should emphasize improving organizational responsiveness, reducing operating costs, or meeting economic needs or a new requirement.

In planning team activities, key decisions should be scheduled early. This is particularly true if a District Office is expected to pick up part of the workload under the consolidation program.

Collecting Workload Data

A significant effort was required to collect, reproduce, or abstract the data needed from existing organizations to estimate the workload for the new organization. Losing organizations may be reluctant to volunteer to do this work. Planners requesting such information must (1) allow adequate time for the losing organizations to do the task with minimal impact on the existing workload, and (2) ensure that the request for information is formal and sent through channels.

Planners must consider the possible benefits of using military teams operating out of FESA, or USAR units on active duty for collecting on-site data, cataloging supplies, setting up inventories, and doing other jobs directly related to skills of personnel in these units.

11 SUMMARY AND CONCLUSIONS

The tasks for implementing RPMA consolidation in the NCR were performed by several IPG task groups. Their work is summarized as follows:

Organization Development

1. Developed the initial USAEA,CA organization structure.
2. Prepared Functional Statements.
3. Developed the TDA.
4. Developed a process for future USAEA,CA expansion.

Financial Management

1. Developed the Financial Management Plan.
2. Recommended use of a revolving fund.
3. Defined a concept for a system to interface ADP systems in use at the affected installations.
4. Proposed ADP support options.
5. Recommended charging overhead to individual jobs, instead of to one account.
6. Revised the Stock Fund procedure.
7. Recommended ways to provide more efficient support services.
8. Proposed budget preparation by discrete cost centers.

Supply Management

1. Proposed use of FESS computer-based system for supply.
2. Determined needed warehouse space.
3. Estimated FE-related workload for Property Control Branch operations.
4. Developed training procedures for operating the revised supply system.
5. Proposed having USAR assistance in establishing a central warehouse.

Staff Engineering and Real Property Maintenance Management Duties

1. Created the position of Staff Engineer to fulfill residual engineering functions.
2. Defined duties of Staff Engineer and RPMM within the new organization.

Procurement Management

1. Defined and evaluated 12 organizational concept alternatives for procurement procedures.
2. Selected the best alternative for use in the new organization.
3. Collected workload data to predict the workload after consolidation.
4. Defined contracting authority limitations.

In planning for the USAEA,CA consolidation, the IPG defined several problems which can be solved to effect smoother consolidations in the future for other locations. Based on the lessons learned from this experience, the IPG recommended the following:

1. Future IPGs should have a knowledge of DEH activities and know what duties are expected of them before they begin work.
2. Accurate, consistent data and installation records should be made available to the IPG.
3. Project guidance should describe the basic operations of the proposed organization.
4. Organizations involved in a consolidation should provide assistance as needed.
5. CPM networks for individual tasks should be incorporated into an integrated network and all interrelationships checked.
6. IPG participants should have experience in the area of specialization with which they will be dealing.
7. Planning groups should closely coordinate activities with their parent organizations.
8. Planners should allow adequate time to obtain data from the various organizations affected by the consolidation.

METRIC CONVERSION FACTORS

1 sq ft = .0929 m²

1 acre = .4047 ha

1 sq yd = .8361 m²

1 mile = 1.6093 km

APPENDIX A:

LIST OF ABBREVIATIONS

ACI: Annual CITA Inventory
ACSAC: Assistant Chief of Staff for Automation and Communications
ADP: Automated Data Processing
A/E: Architect/Engineer
AHS: Arlington Hall Station
AMS: Army Management Structure
APC: Accounting Processing Code
APORS: Army Performance Oriented Review System
APP: Army Procurement Procedure
ASL: Authorized Stock List
BPA: Blanket Purchase Agreement
CA: Commercial Activities
CCA: Comparative Cost Analysis
CCF: Cost Comparison Form (Part of DSICP)
CERL: U.S. Army Construction Engineering Research Laboratory
CFJ: CITA Function Justification
CG,MDW: Commanding General, Military District of Washington
CITA: Commercial/Industrial Type Activities
COB: Close of Business
COE: Chief of Engineers
COEMIS: Corps of Engineers, Management Information System
CONUS: Continental United States
COR: Contracting Officer's Representative
CPAS: CITA Proposed Action Summary
CPM: Critical Path Method
CPO: Civil Personnel Office
CWRP: Civil Works Revolving Fund
DAR: Defense Acquisition Regulations
DCSRM: Deputy Chief of Staff for Resource Management
DCSACQ: Deputy Chief of Staff for Acquisitions
DCSEH: Deputy Chief of Staff for Engineering and Housing
DCSLOG: Deputy Chief of Staff for Logistics
DCSRM: Deputy Chief of Staff for Resource Management
DMA: Defense Mapping Agency
DOD: Department of Defense
DODAAC: DOD Activity Address Code
DRIS: Defense Retail Interservice Support
DSICP: District Summary for In-House or Contractor Performance
ECI: Engineer Contract Instructions
EPPD: Engineering Plans and Programs Division
ESC: Engineer Studies Center
F&A: Finance and Accounting
FE: Facilities Engineer
FECG: Facilities Engineer Coordination Group
FEGLI: Federal Employees Group Life Insurance
FESA: Facilities Engineering Support Agency
FESS: Facility Engineer Supply System

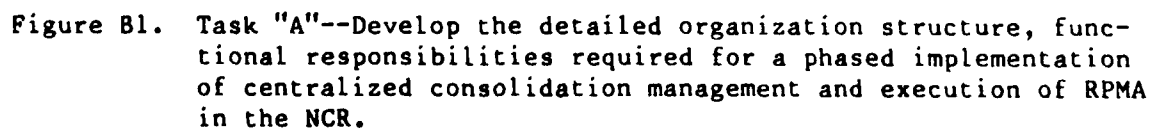
FH: Family Housing
 FHMA: Family Housing Maintenance Activity
 FIA: Financial Inventory Accounting
 FMB: Financial Management Branch
 FMP: Financial Management Plan
 FSN: Federal Stock Number
 FSS: Federal Supply Source
 G&A: General and Administrative
 GSA: General Services Administration
 HDL: Harry Diamond Laboratories
 HND: Huntsville Division, Corps of Engineers
 HSC: Hospital Service Command
 HTC: Hydrographic and Topographic Center
 IFS: Integrated Facilities System
 IMP: Installation Master Plan
 IMPB: Installation Master Planning Board
 INSCOM: Intelligence and Security Command
 IPG: Implementation Planning Group
 ISSA: Interservice Support Agreement
 JAG: Judge Advocate General
 JCAS: Job Cost Accounting System
 JIRSG: Joint Interservice Resource Study Group
 LIN: Line Item Number
 MACOM: Major Command Headquarters
 MARM: Manpower Allocation & Requirements Methodology
 MCA: Military Construction - Army
 MDW: Military District of Washington
 MFR: Memorandum for the Record
 MISO: Management Information Systems Office
 MOU: Memorandum of Understanding
 MRO: Material Release Order
 NAB: Baltimore District, Corps of Engineers
 NAD: North Atlantic Division, Corps of Engineers
 NCR: National Capital Region
 NFIP: National Foreign Intelligence Program
 NLT: Not Later Than
 OCE: Office of the Chief of Engineers
 OCPO: Operating Civilian Personnel Office
 O&F: Organization and Functions
 O&MA: Operations and Maintenance Activity
 P&A: Personnel Administration
 PB: Property Book
 PBO: Property Book Officer
 PDB1: Project Development Brochure, Part 1
 P&C: Purchasing and Contracting
 PCB: Property Control Branch
 POC: Point of Contact
 PR&C: Purchase Request and Commitment Document
 R/A: Requirements/Authorizations
 RCO: Resident Contracting Officer
 RIF: Reduction in Force
 RMO: Resource Management Officer
 RP: Real Property
 RPMA: Real Property Maintenance Activities

RPM: Real Property Maintenance Manager
SAG: Study Advisory Group
SARPM: San Antonio Real Property Maintenance Agency
SE: Staff Engineer
SES: Senior Executive Service
SOP: Standard Operating Procedure
SOW: Scope of Work
STANFINS: Standard Financial System
T&A: Time and Attendance
TDA: Table of Distribution and Allowances
TFO/TBO: Transaction for Others/Transaction by Others
TOF: Transfer of Function
TRADOC: U.S. Army Training and Doctrine Command
UIC: Unit Identification Code
USACE: U.S. Army Corps of Engineers
USACSC: U.S. Army Computer Support Command
USAEA,CA: U.S. Army Engineer Activity, Capital Area
USAEASA: U.S. Army Engineer Automation Support Activity
USAMSSA: U.S. Army Management System Support Agency
VCSA: Vice Chief of Staff of the Army
VHFS: Vint Hill Farms Station
WRAMC: Walter Reed Army Medical Center
SRS: 5 Year CITA Review Schedule

APPENDIX B:

DETAILED TASK CPM NETWORKS

The attached networks (Figures B1 through B10) were designed as functional area slices of one integrated network. Therefore, there are dashed lines that enter the network from off-page and other lines that terminate off-page. Assembling the individual networks into one large network will clarify the intent of these lines.



1 9 8 0

80 81

JUN

JUL

AUG

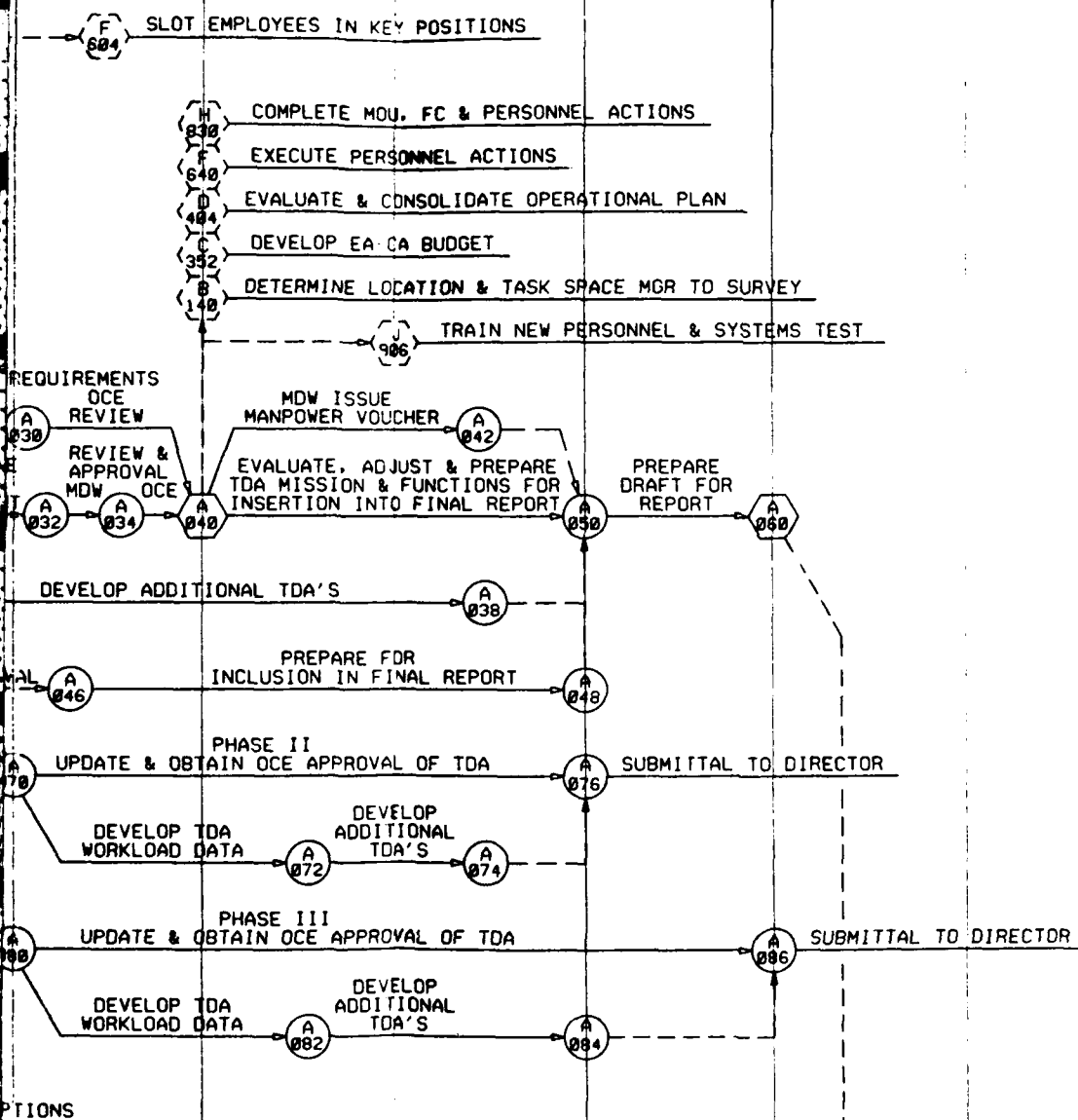
SEP

OCT

NOV

DEC

JAN



LEGEND:

TASK

A 123

EVENT NODE

DEP
T

A 012

J 906

CPM/PE
RPMA C
CONSOLI

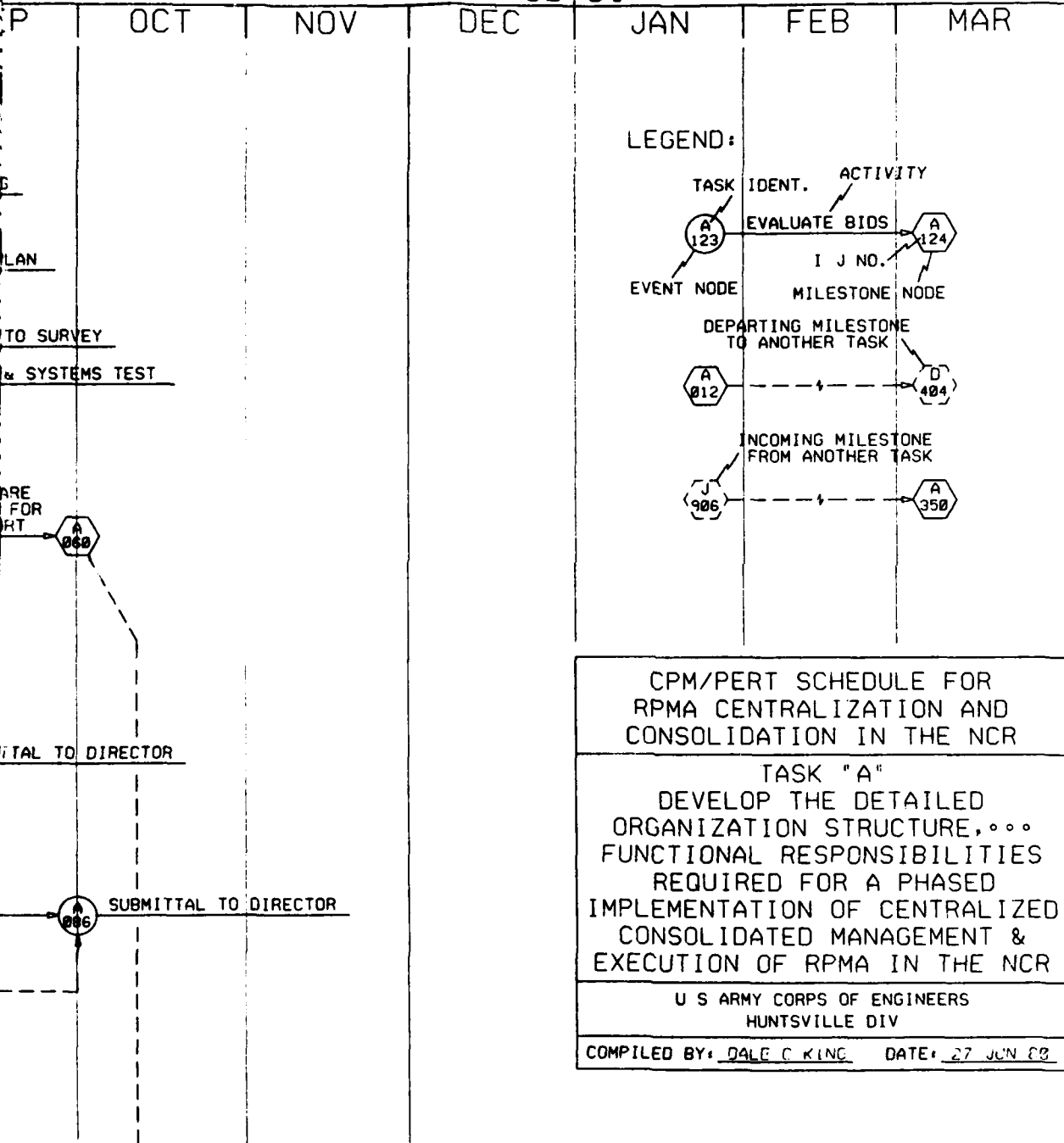
DEVEL
ORGANIZA
FUNCTION
REQUI
IMPLEMENT
CONSOLI
EXECUTION

U S A

COMPILED BY: J

Structure, func-
implementation
execution of RPMA

80 | 81



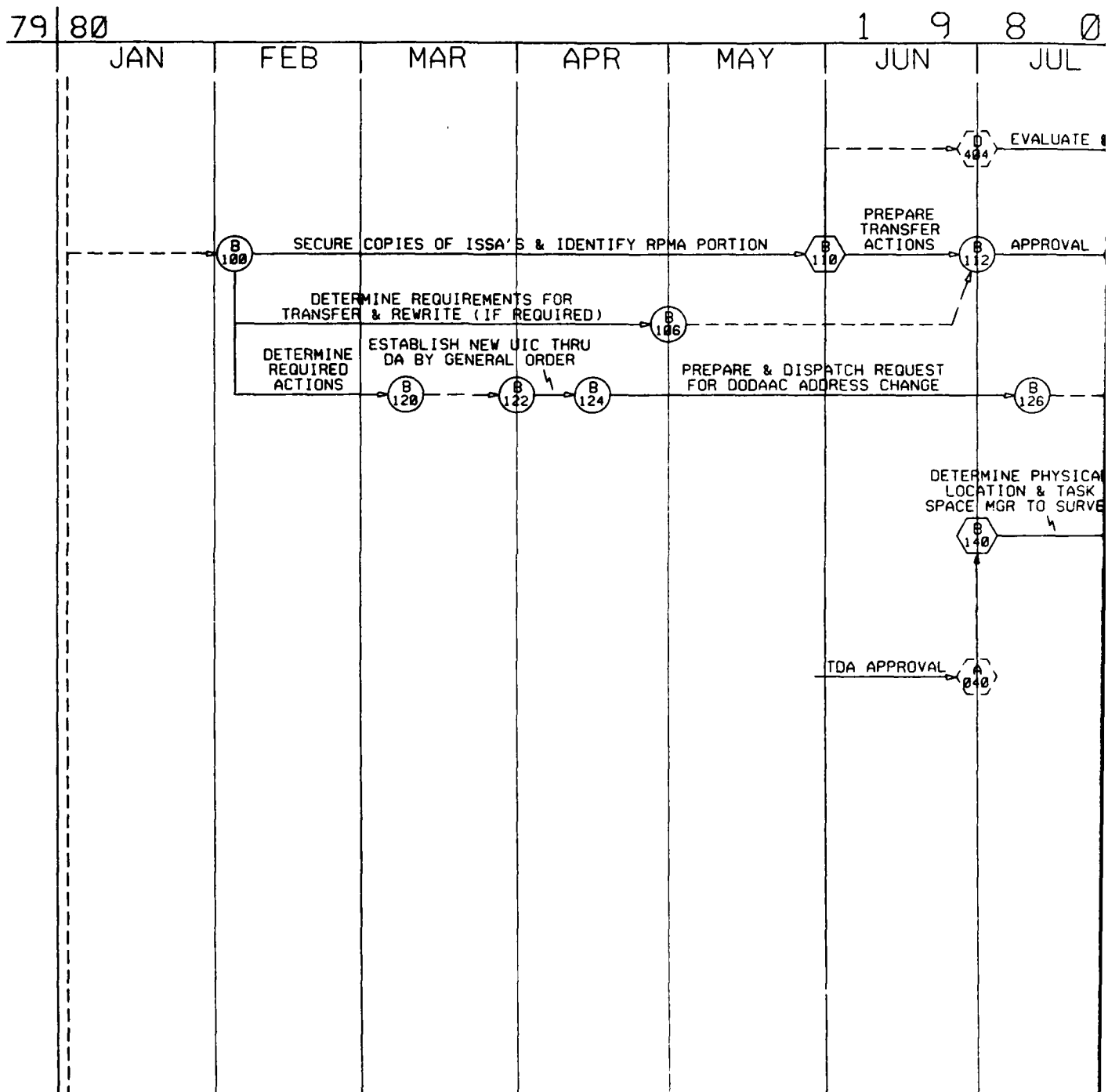
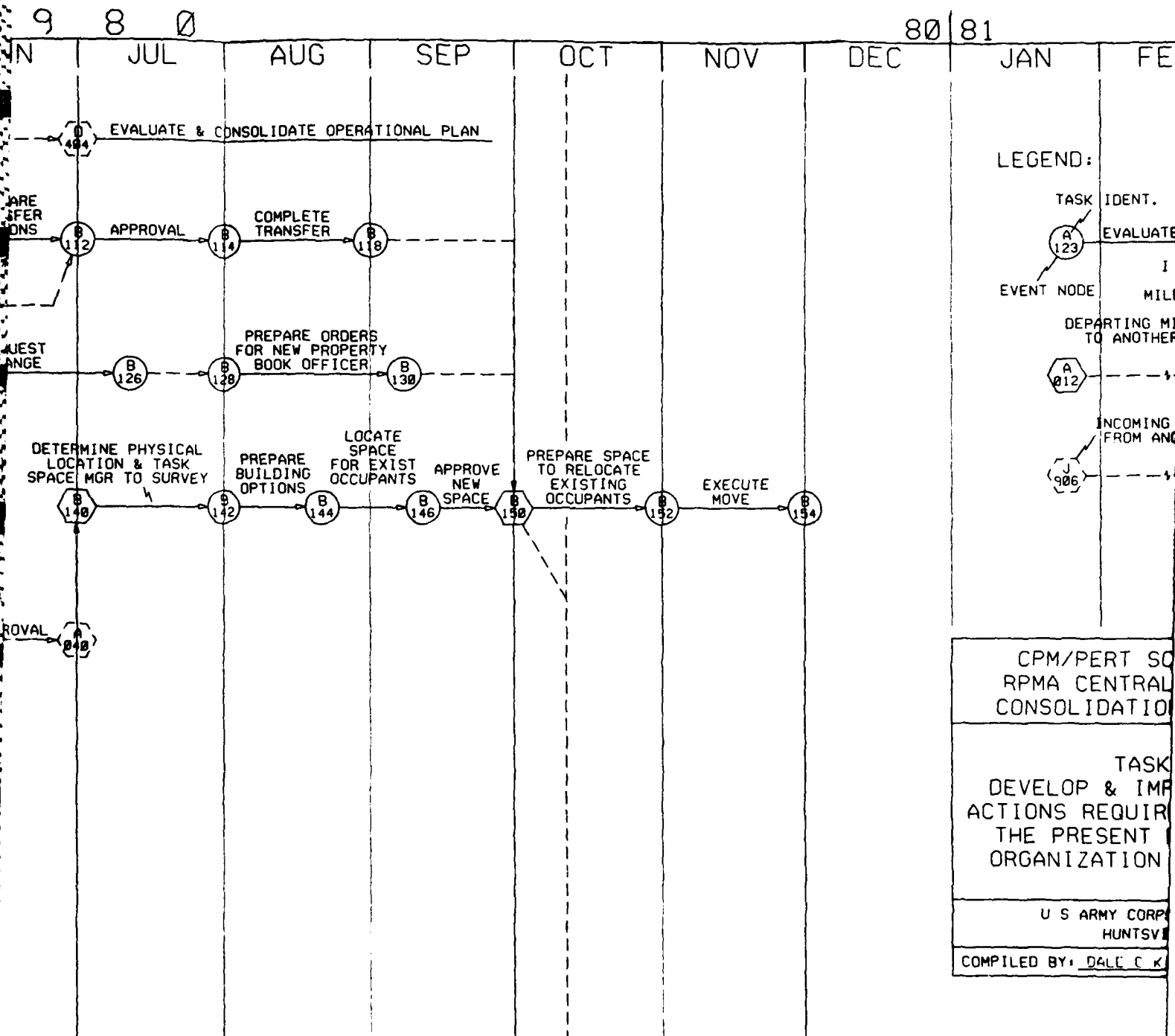


Figure B2. Task "B"--Develop and implement those actions required to transfer the present MDW Engineer Organization to the USACE.

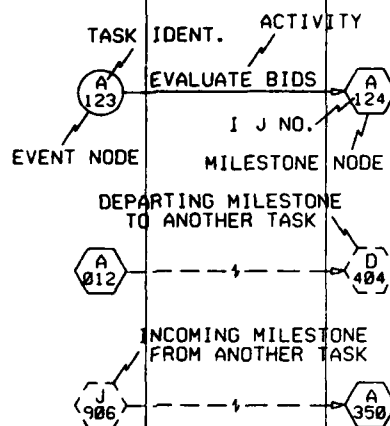


red to
the USACE.

80 | 81

OCT NOV DEC JAN FEB MAR

LEGEND:



PREPARE SPACE
TO RELOCATE
EXISTING
OCCUPANTS

EXECUTE
MOVE

B 152

B 154

CPM/PERT SCHEDULE FOR
RPMA CENTRALIZATION AND
CONSOLIDATION IN THE NCR

TASK "B"
DEVELOP & IMPLEMENT THOSE
ACTIONS REQUIRED TO TRANSFER
THE PRESENT MDW ENGINEER
ORGANIZATION TO THE USACE

U S ARMY CORPS OF ENGINEERS
HUNTSVILLE DIV

COMPILED BY: DALE C KING DATE: 27 JUN 80

PREVIOUS PAGE
IS BLANK

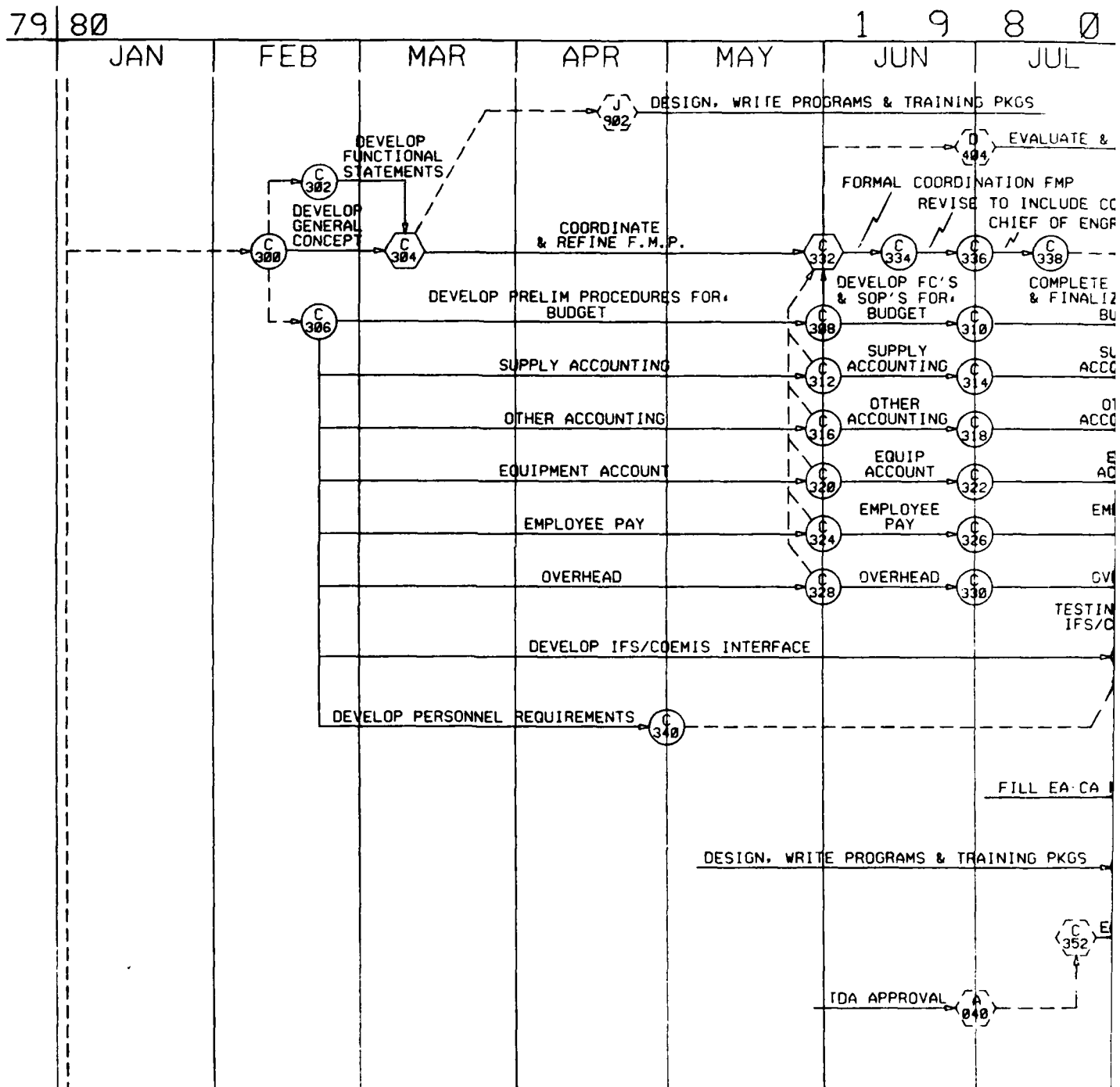
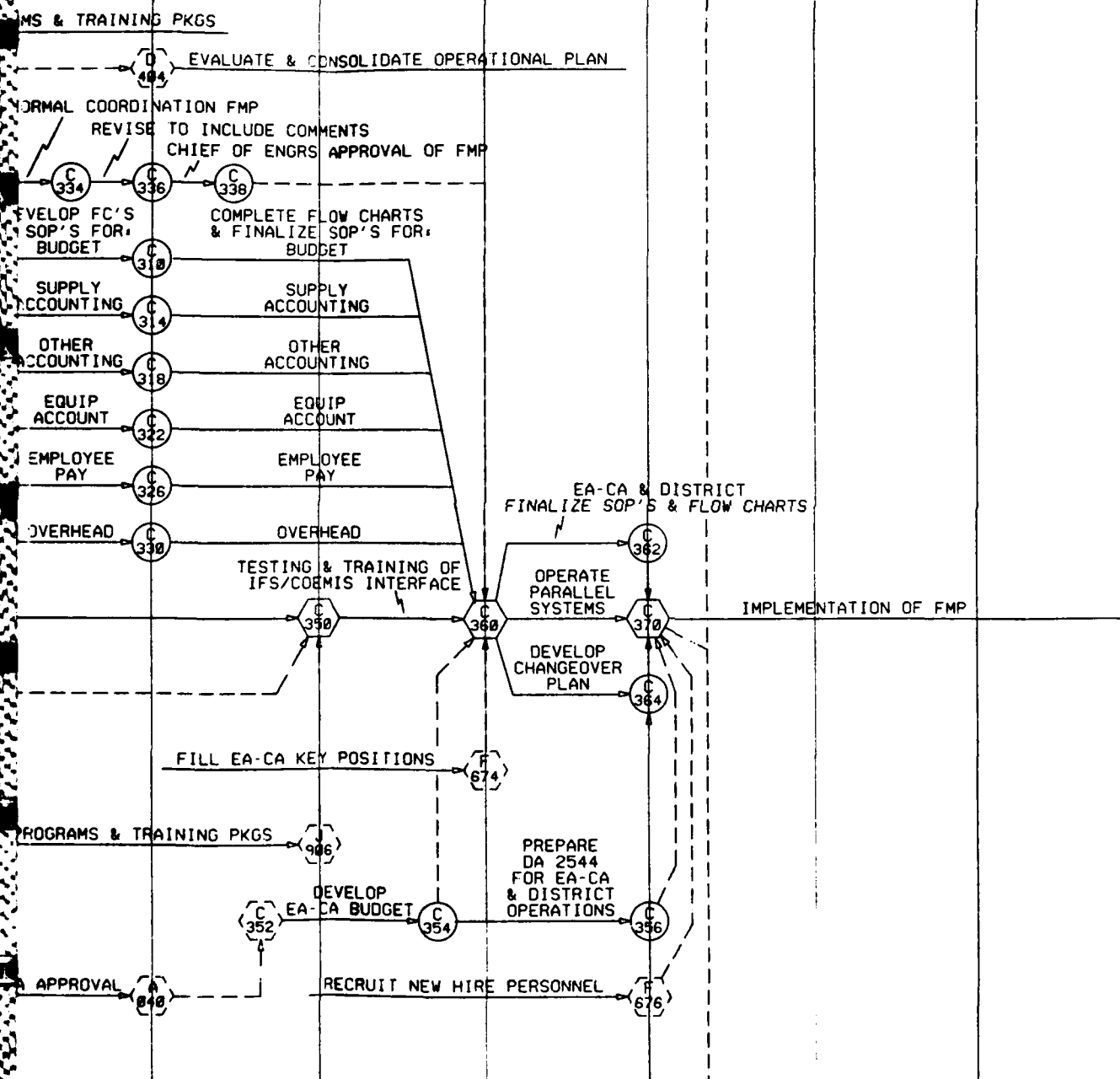


Figure B3. Task "C"--Develop the detailed financial management plan to include establishment of a revolving fund for reimbursement.

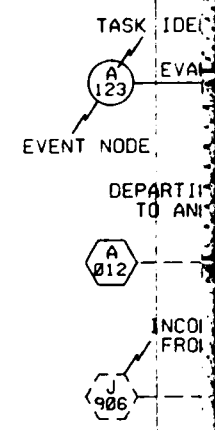
1 9 8 0

80 81

JUN JUL AUG SEP OCT NOV DEC JAN



LEGEND:



CPM/PERT
 RPMA CENT.
 CONSOLIDAT

 TA
 DEVELOP A DE
 MANAGEMENT
 ESTABLISHMEN
 FUND FOR

 U S ARMY Q
 HUNT
 COMPILED BY: GALE

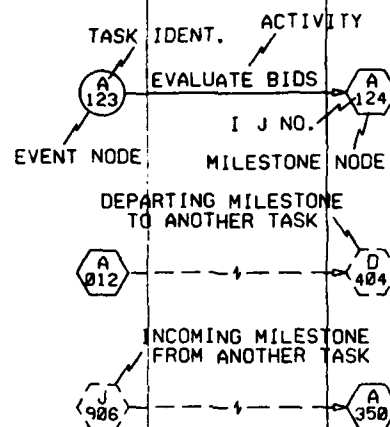
ent plan to
 imbursement.

3

80 | 81

CT NOV DEC JAN FEB MAR

LEGEND:



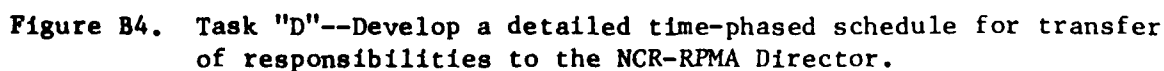
CPM/PERT SCHEDULE FOR
RPMA CENTRALIZATION AND
CONSOLIDATION IN THE NCR

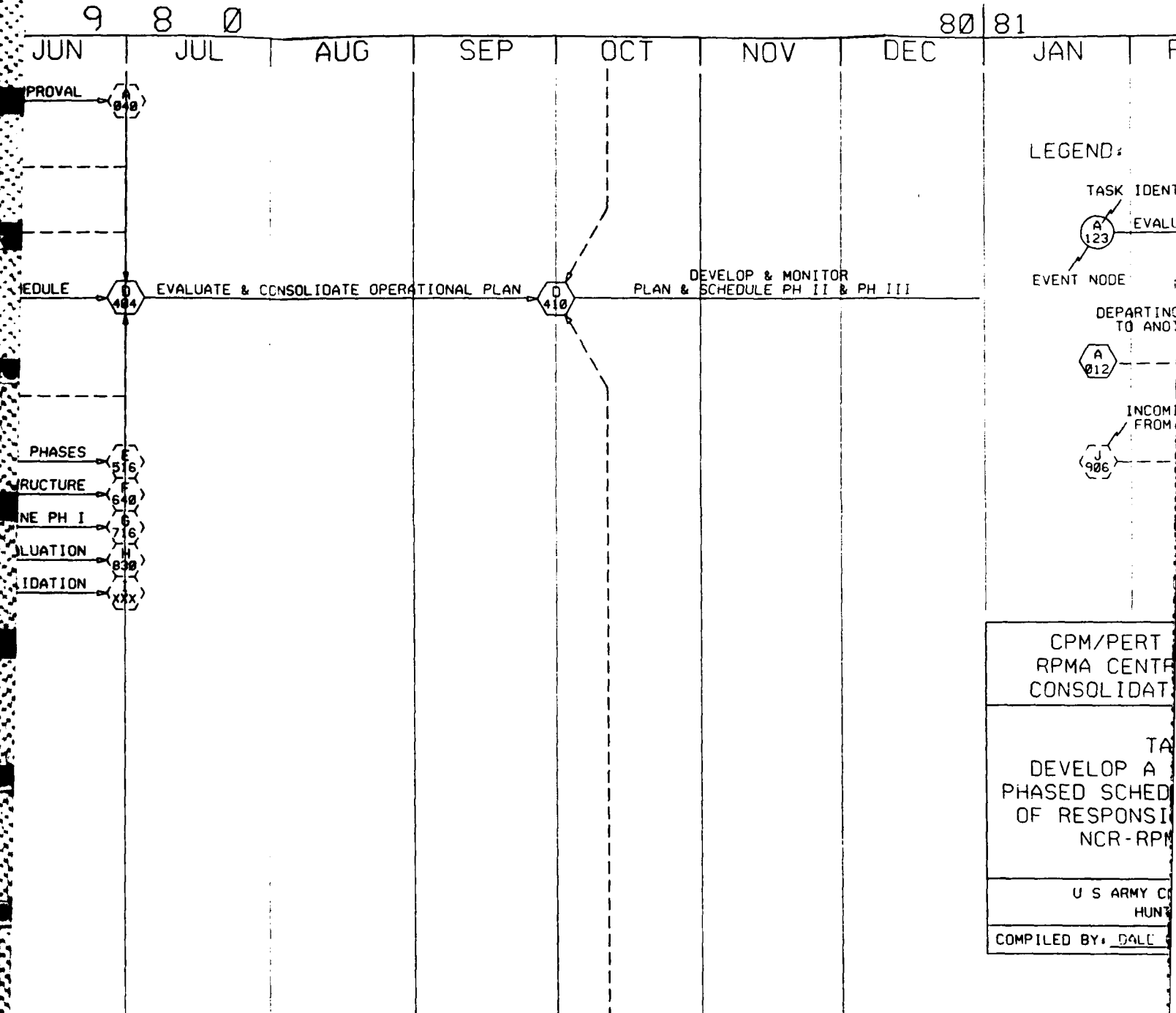
TASK "C"
DEVELOP A DETAILED FINANCIAL
MANAGEMENT PLAN TO INCLUDE
ESTABLISHMENT OF A REVOLVING
FUND FOR REIMBURSEMENT

U S ARMY CORPS OF ENGINEERS
HUNTSVILLE DIV

COMPILED BY: DALE C KING DATE: 27 JUN 80

PREVIOUS PAGE
IS BLANK





CPM/PERT
 RPMA CENTR
 CONSOLIDAT

TA
 DEVELOP A
 PHASED SCHED
 OF RESPONSI
 NCR-RPM

U S ARMY CO
 HUN

COMPILED BY: DALL

for transfer

80 | 81

OCT

NOV

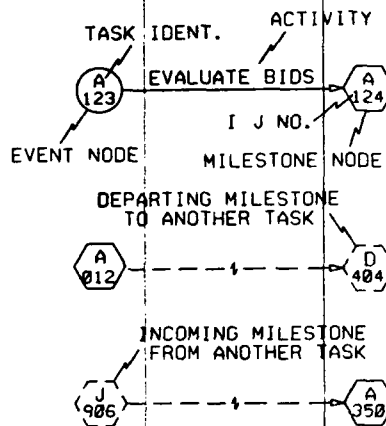
DEC

JAN

FEB

MAR

LEGEND:



DEVELOP & MONITOR
PLAN & SCHEDULE PH II & PH III

CPM/PERT SCHEDULE FOR
RPMA CENTRALIZATION AND
CONSOLIDATION IN THE NCR

TASK "D"
DEVELOP A DETAILED TIME-
PHASED SCHEDULE FOR TRANSFER
OF RESPONSIBILITIES TO THE
NCR-RPMA DIRECTOR

U S ARMY CORPS OF ENGINEERS
HUNTSVILLE DIV

COMPILED BY: DALE C. KING DATE: 27 JUN 83

PREVIOUS PAGE
IS BLANK

3 of 3

145

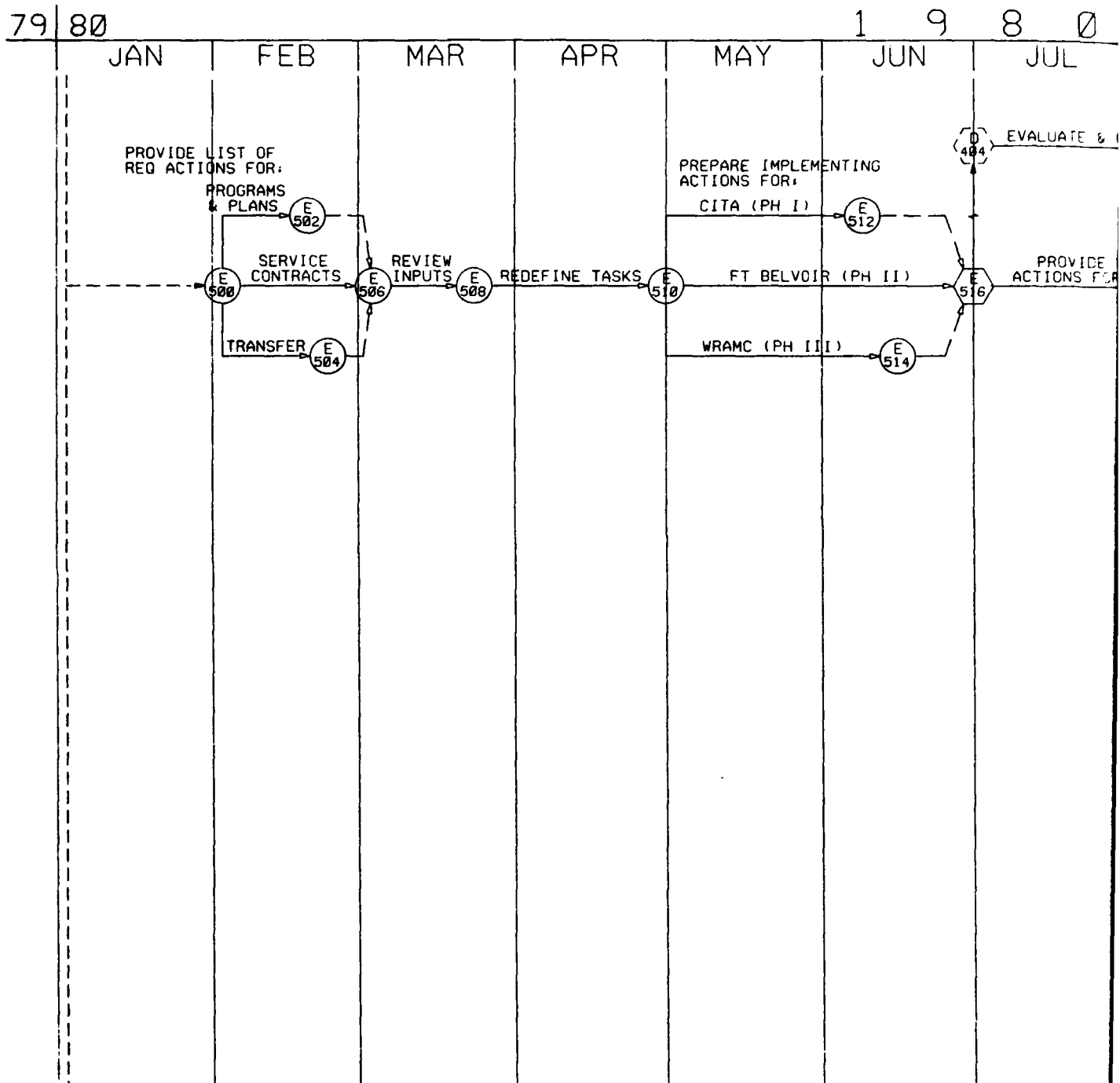
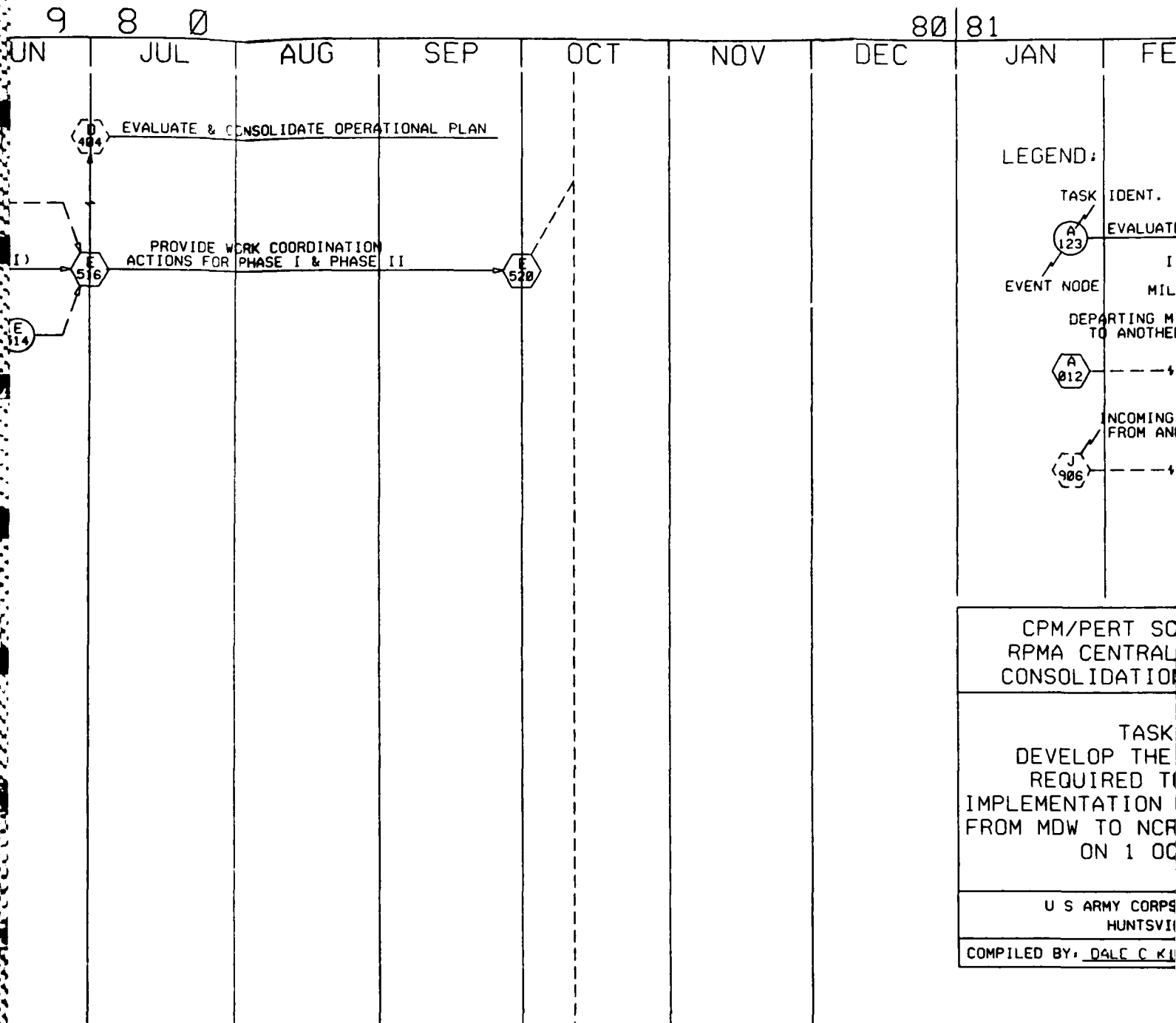
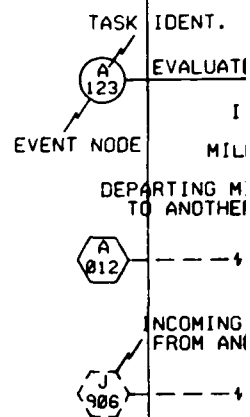


Figure B5. Task "E"--Develop the procedures required to transfer implementation responsibility from the MDW to NCR-RPMA Director on 1 October 1980.



LEGEND:



CPM/PERT SO
RPMA CENTRAL
CONSOLIDATION

TASK
DEVELOP THE
REQUIRED TO
IMPLEMENTATION
FROM MDW TO NCR
ON 1 OCT

U S ARMY CORPS
HUNTSVILLE

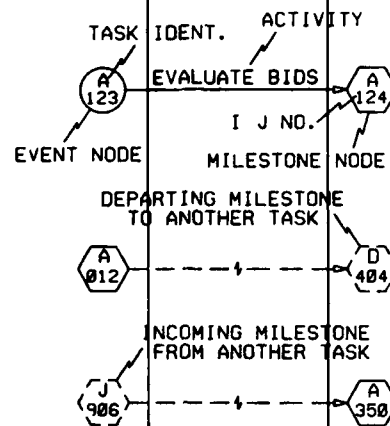
COMPILED BY: DALE C. K.

er imple-
director on

80 | 81

OCT NOV DEC JAN FEB MAR

LEGEND:



CPM/PERT SCHEDULE FOR
RPMA CENTRALIZATION AND
CONSOLIDATION IN THE NCR

TASK "E"
DEVELOP THE PROCEDURES
REQUIRED TO TRANSFER
IMPLEMENTATION RESPONSIBILITY
FROM MDW TO NCR-RPMA DIRECTOR
ON 1 OCT 1980

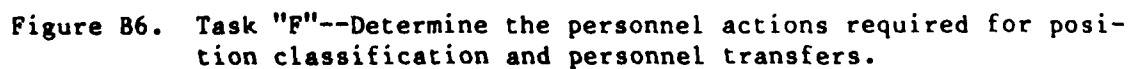
U S ARMY CORPS OF ENGINEERS
HUNTSVILLE DIV

COMPILED BY: DALE C KING DATE: 27 JUN 80

3003 197

PREVIOUS PAGE
IS BLANK

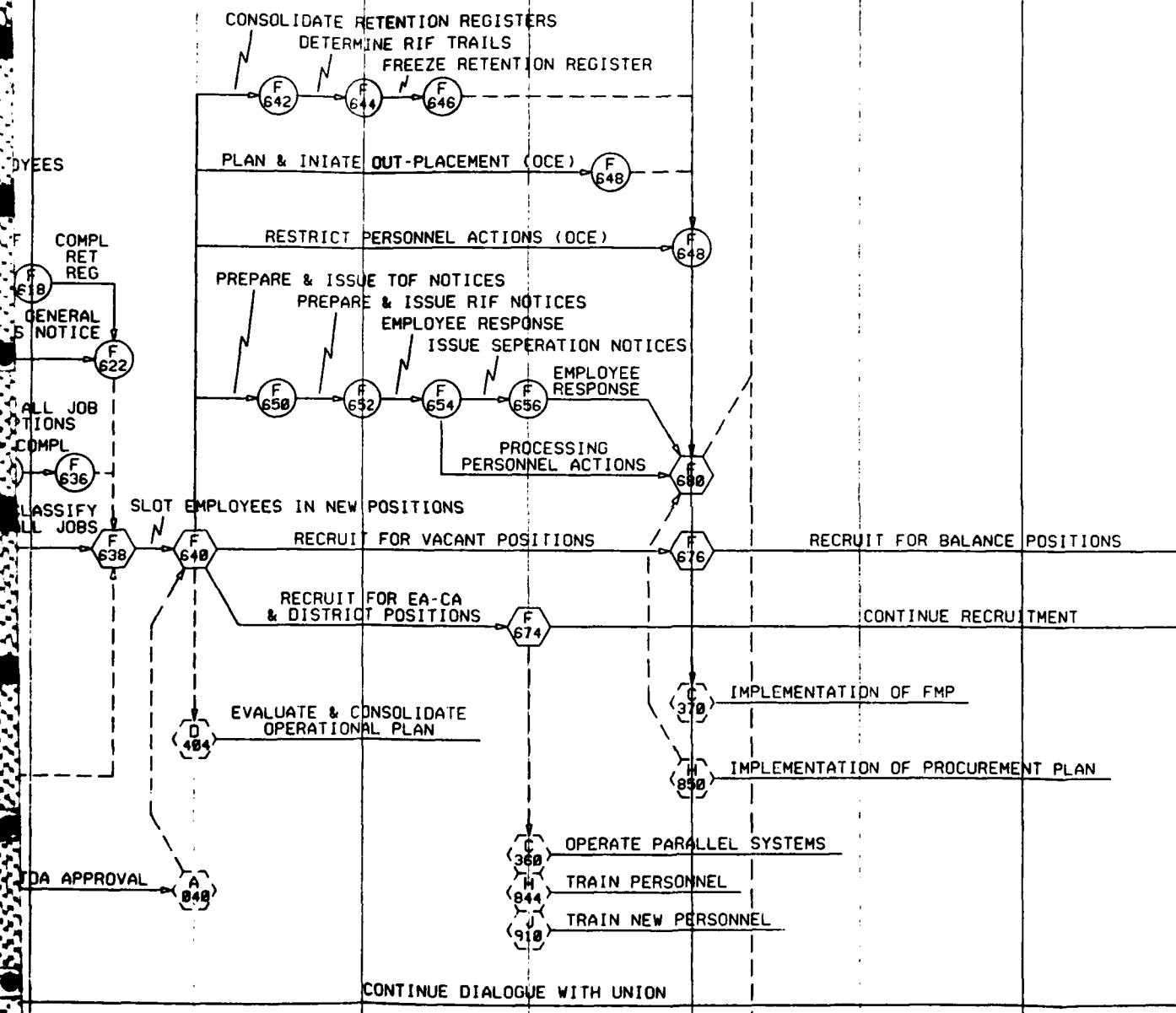




1 9 8 0

80 81

JUN JUL AUG SEP OCT NOV DEC JAN



LEGEND

- TASK (A 123)
- EVENT NODE (A 812)
- DEPT (J 906)

CPM/PE
RPMA CE
CONSOLI

DETERM
ACTION
POSITIO
& PERS

U S AR

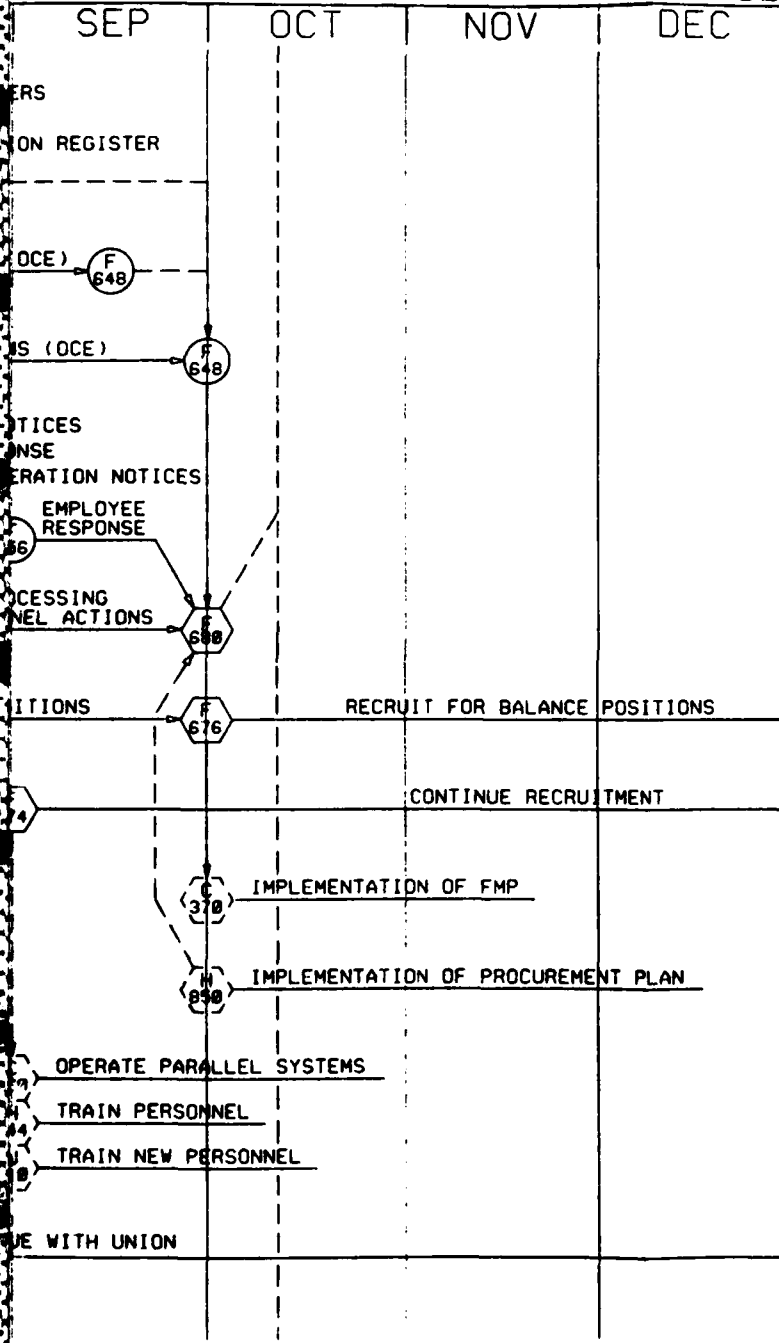
COMPILED BY: DA

ired for posi-

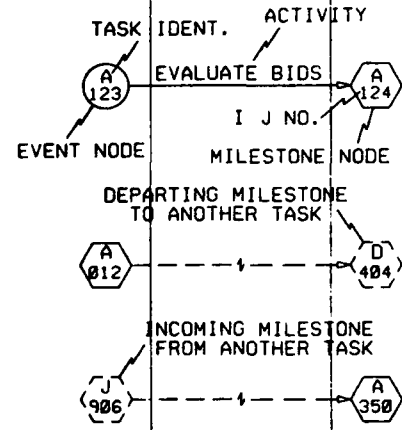
6

149

80 81



LEGEND:



CPM/PERT SCHEDULE FOR
RPMA CENTRALIZATION AND
CONSOLIDATION IN THE NCR

TASK "F"

DETERMINE THE PERSONNEL
ACTIONS REQUIRED FOR
POSITION CLASSIFICATION
& PERSONNEL TRANSFERS

U S ARMY CORPS OF ENGINEERS
HUNTSVILLE DIV

COMPILED BY: DALE C KING DATE: 27 JUN 80

③ of 3 149

PREVIOUS PAGE
IS BLANK

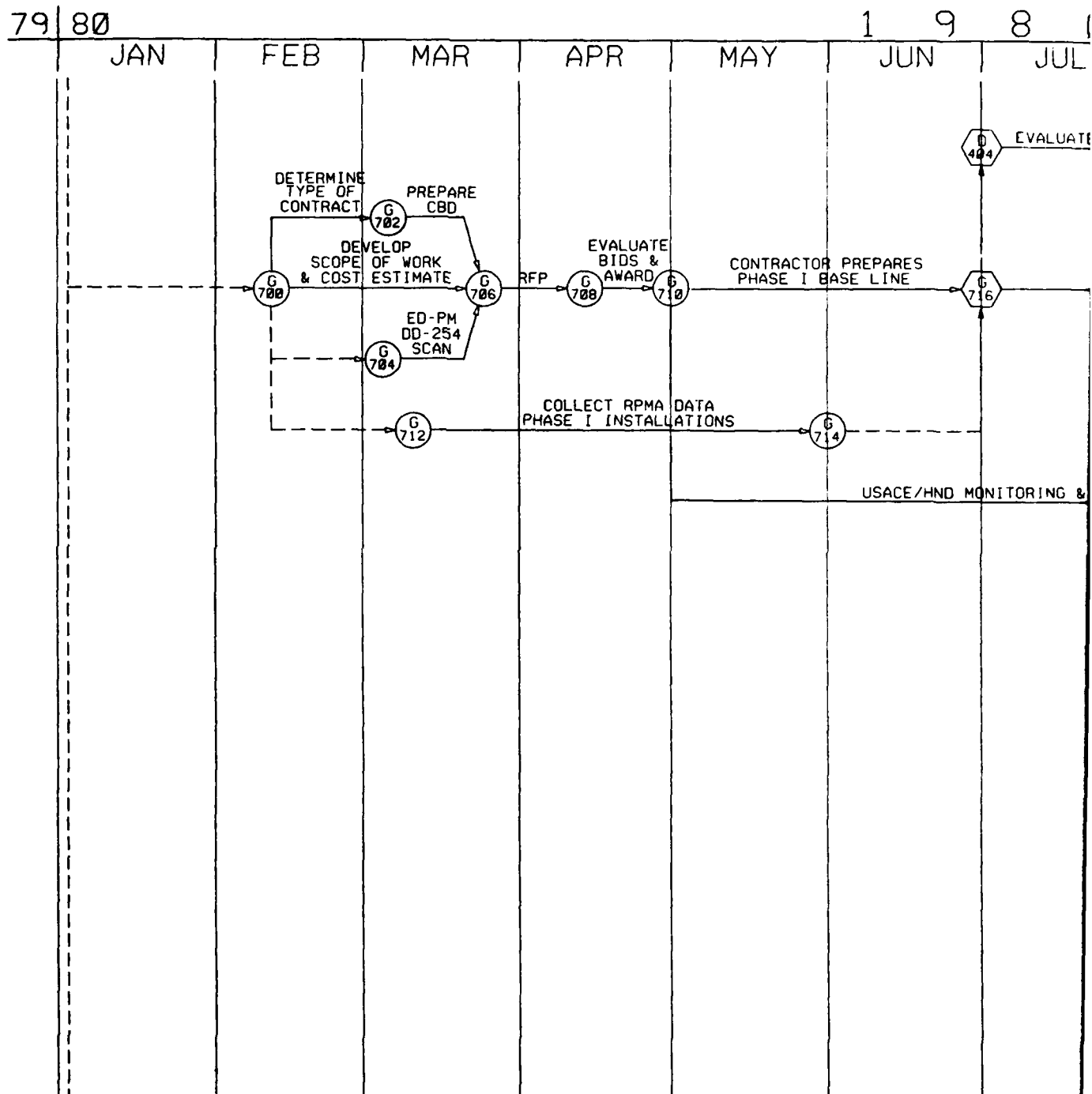
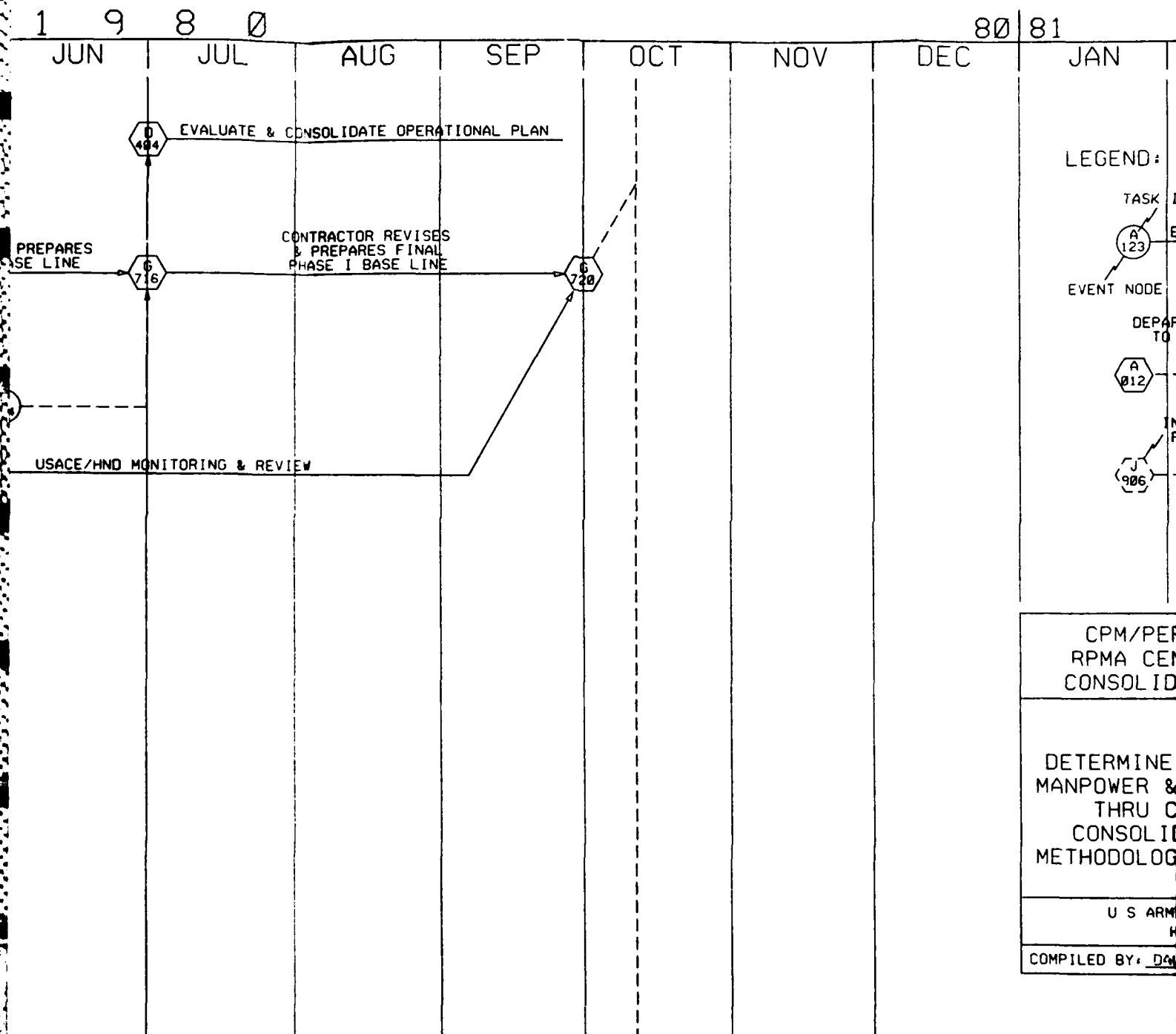


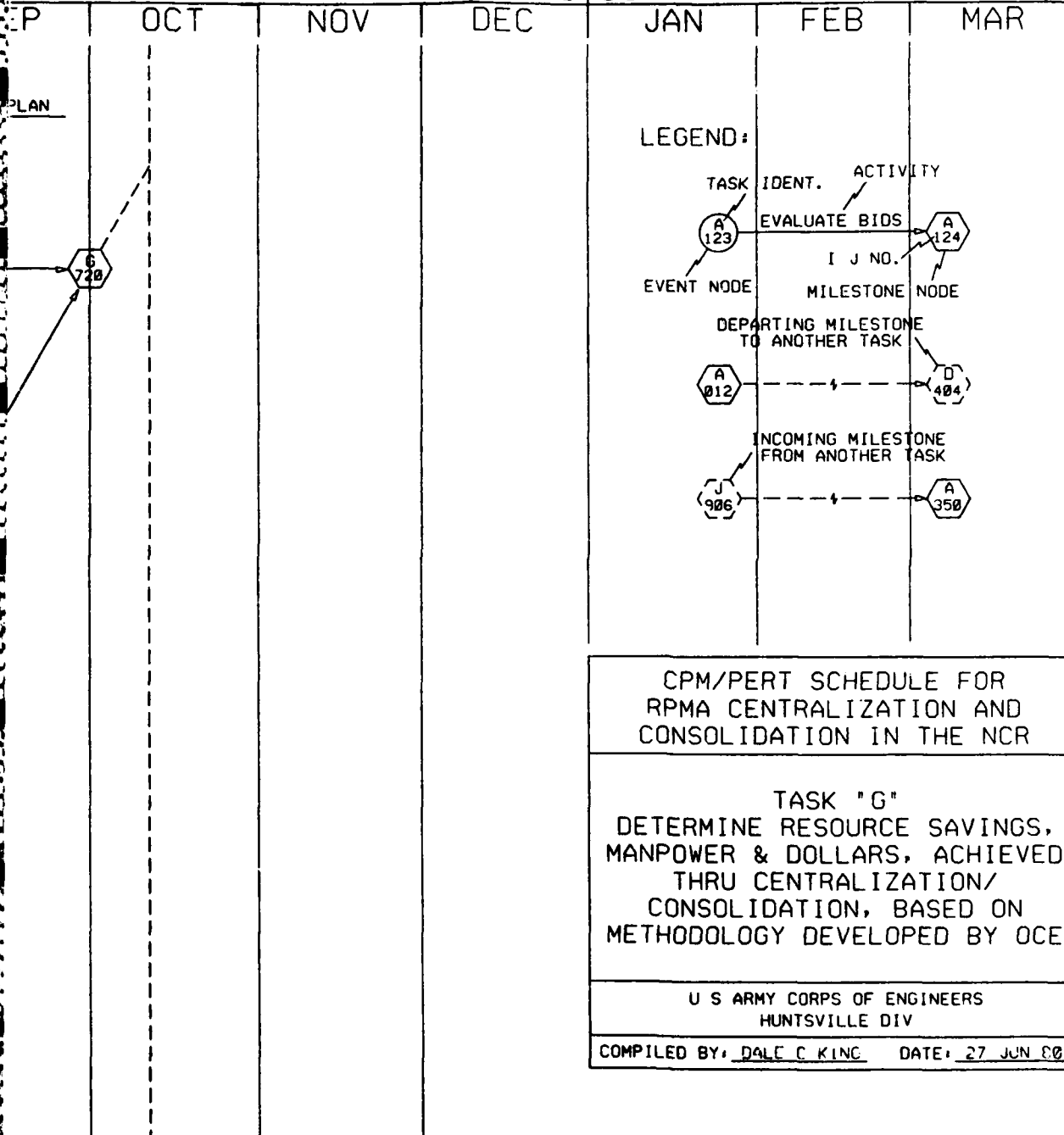
Figure B7. Task "G"--Determine resource savings, manpower, and dollars, achieved through centralization/consolidation, based on methodology developed by OCE.



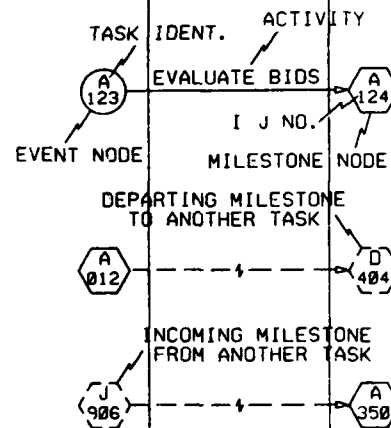
and dollars,
based on meth-

(2)

80 | 81



LEGEND:



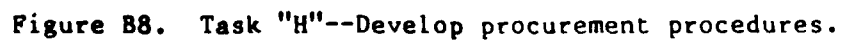
CPM/PERT SCHEDULE FOR
RPMA CENTRALIZATION AND
CONSOLIDATION IN THE NCR

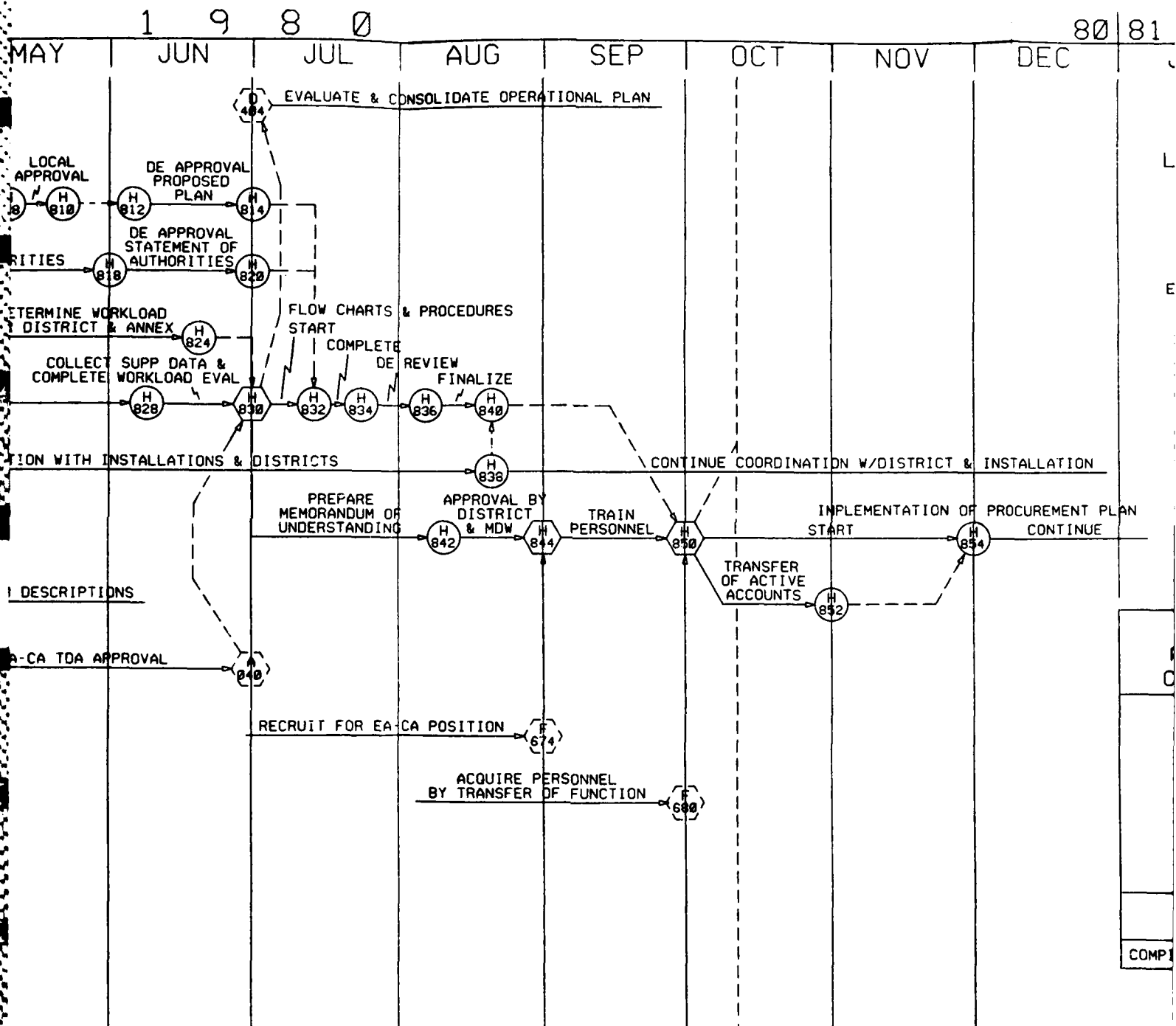
TASK "G"
DETERMINE RESOURCE SAVINGS,
MANPOWER & DOLLARS, ACHIEVED
THRU CENTRALIZATION/
CONSOLIDATION, BASED ON
METHODOLOGY DEVELOPED BY OCE

U S ARMY CORPS OF ENGINEERS
HUNTSVILLE DIV

COMPILED BY: DALE C KING DATE: 27 JUN 80

PREVIOUS PAGE
IS BLANK





procedures.

80 | 81

OCT

NOV

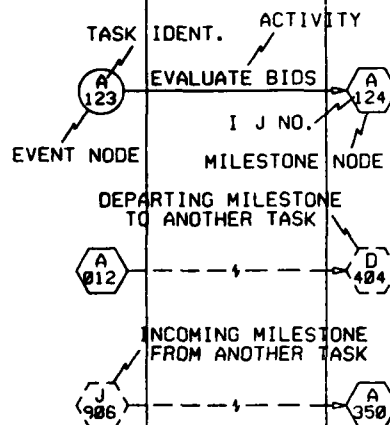
DEC

JAN

FEB

MAR

LEGEND:



CONTINUE COORDINATION W/DISTRICT & INSTALLATION

IMPLEMENTATION OF PROCUREMENT PLAN
START CONTINUE

TRANSFER
OF ACTIVE
ACCOUNTS

CPM/PERT SCHEDULE FOR
RPMA CENTRALIZATION AND
CONSOLIDATION IN THE NCR

TASK "H"

DEVELOP
PROCUREMENT
PROCEDURES

U S ARMY CORPS OF ENGINEERS
HUNTSVILLE DIV

COMPILED BY: DALE C KING DATE: 27 JUN 80

PREVIOUS PAGE
IS BLANK



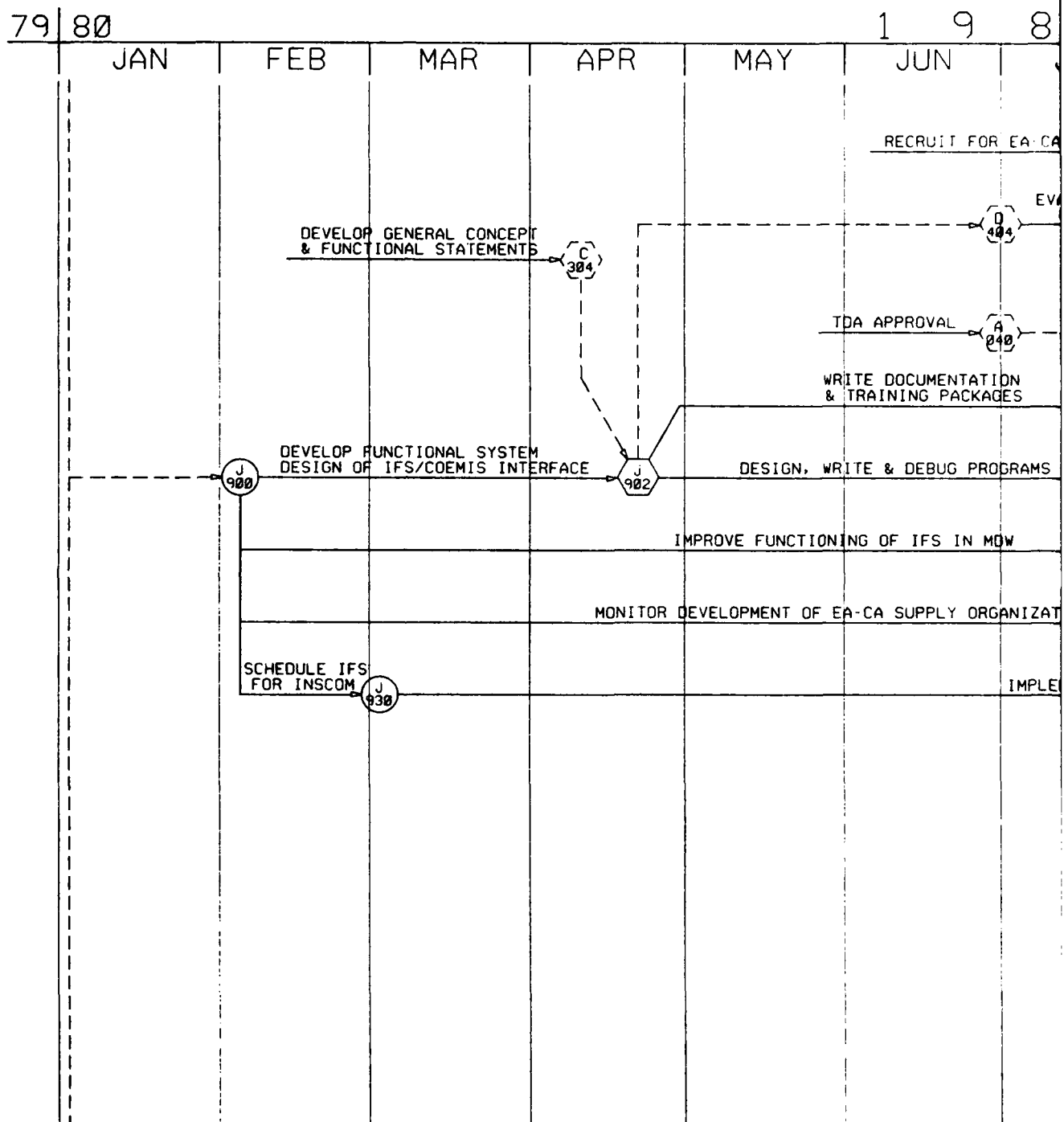
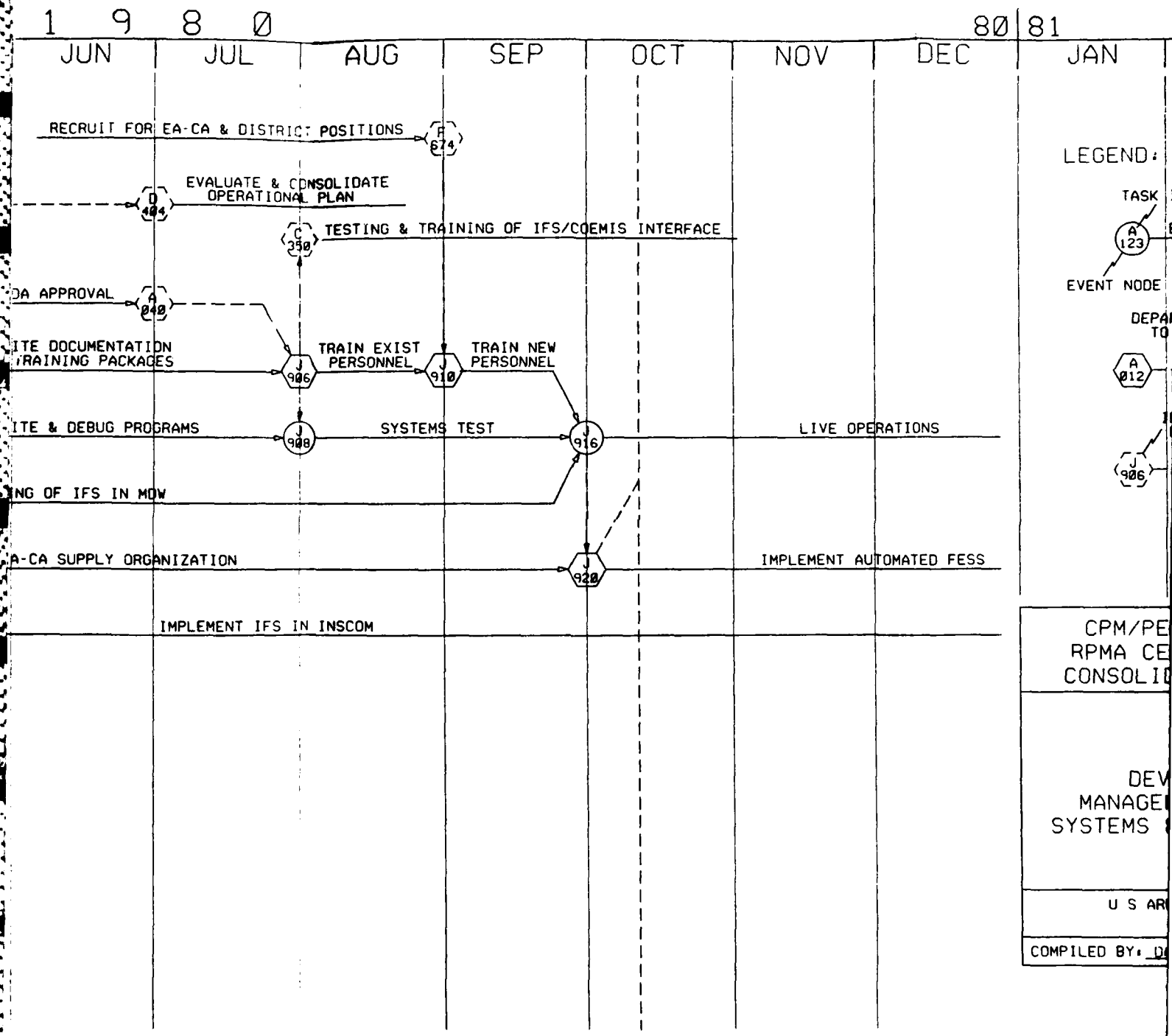
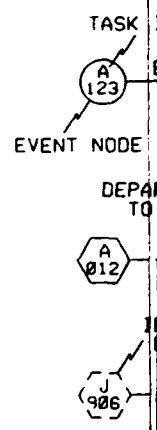


Figure B9. Task "J"--Develop automated management information systems and their interfaces.



LEGEND:



CPM/PE
RPMA CE
CONSOLID

DEV
MANAGE
SYSTEMS

U S AR

COMPILED BY: D

ation systems and

80 | 81

OCT

NOV

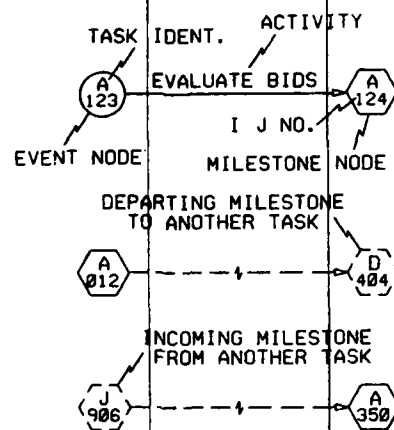
DEC

JAN

FEB

MAR

LEGEND:



EMIS INTERFACE

LIVE OPERATIONS

IMPLEMENT AUTOMATED FESS

CPM/PERT SCHEDULE FOR RPMA CENTRALIZATION AND CONSOLIDATION IN THE NCR

TASK "J"

DEVELOP AUTOMATED
MANAGEMENT INFORMATION
SYSTEMS & THEIR INTERFACES

U S ARMY CORPS OF ENGINEERS
HUNTSVILLE DIV

COMPILED BY: DALE C KING DATE: 27 JUN 80

PREVIOUS PAGE
IS BLANK



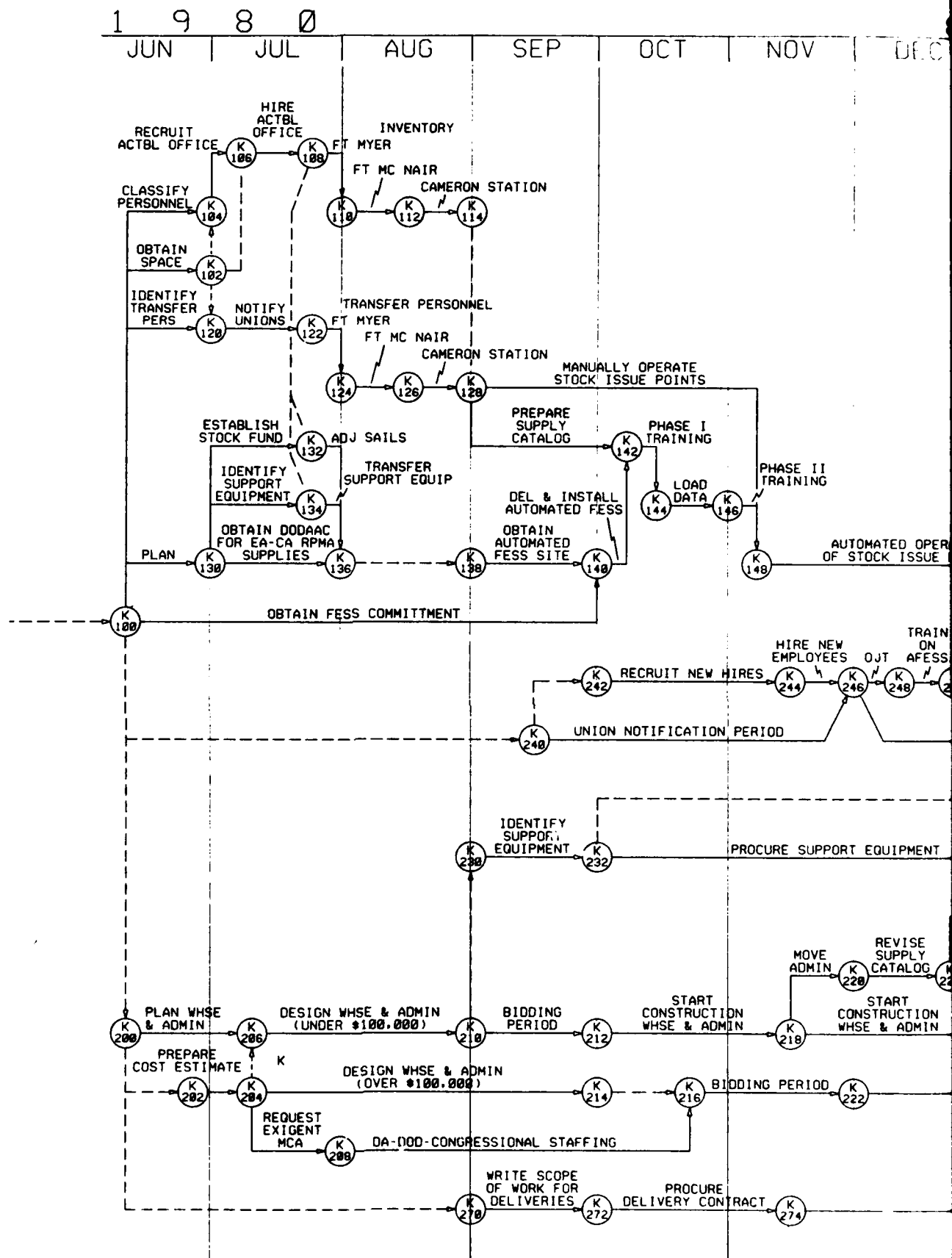
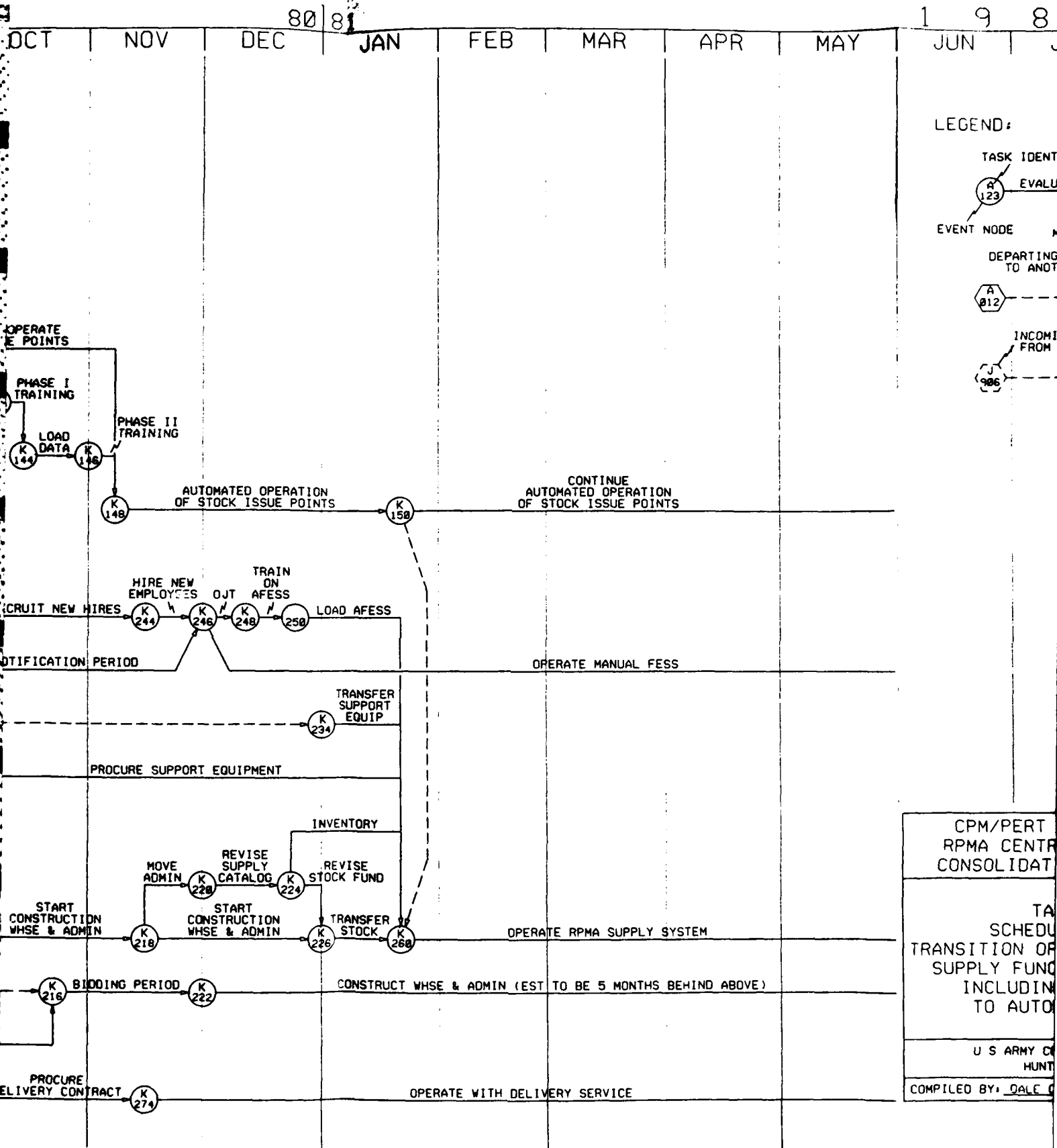


Figure B10. Task "K"--Schedule of the transition of DCSLOG engineer supply functions to DCSEH including the manual to automated modes.



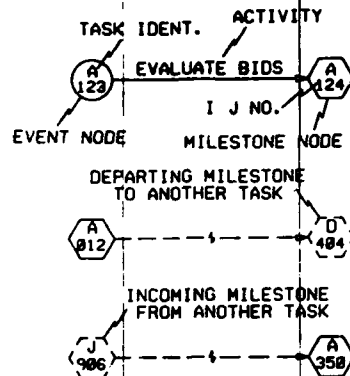
of DCSLOG
cluding the

2

1 9 8 1

MAR APR MAY JUN JUL AUG

LEGEND



CONTINUE
OMATED OPERATION
OCK ISSUE POINTS

ERATE MANUAL FESS

E RPMA SUPPLY SYSTEM

TO BE 5 MONTHS BEHIND ABOVE)

RY SERVICE

CPM/PERT SCHEDULE FOR
RPMA CENTRALIZATION AND
CONSOLIDATION IN THE NCR

TASK "K"
SCHEDULE OF THE
TRANSITION OF DCSLOG ENGINEER
SUPPLY FUNCTIONS TO DCSEH
INCLUDING THE MANUAL
TO AUTOMATED MODES

U S ARMY CORPS OF ENGINEERS
HUNTSVILLE DIV

COMPILED BY: DALE C KING DATE: 10 SEP 80

PREVIOUS PAGE
IS BLANK



APPENDIX C:

DETAILED PROCESS--PROGRAM DEVELOPMENT AND FINANCIAL MANAGEMENT

This appendix summarizes program development and financial management activities to be done within each organization. The District referred to throughout is the Baltimore District Office. Organizations not otherwise designated are part of the USAEA,CA. Names of the various organizational elements are given in full on the flowcharts, but may be abbreviated in the supporting narrative.

The USAEA,CA role in program development and financial management is outlined in Figures C1 and C2. Each process is discussed in outline form with reference to the figures.

MCA Project Procedures (Figure C1)

1. The Programs Branch sends a DF to all using agencies requesting changes or additions to the present program.
2. The using agency submits changes with data required to prepare a DD Form 1391 and Project Development Brochure Part 1 (PDB1) in accordance with TM 5-800-3 and AR 415-30.
3. The Staff Engineer provides preparation guidance for the agenda of the Installation Master Planning Branch (IMPB) meeting.
4. The Programs Branch prepares the agenda for the IMPB meeting including charts, maps, and narrative.
5. The Staff Engineer approves the agenda and schedules an IMPB meeting.
6. The IMPB reviews the presentation, approves the project, and sets the project priority.
7. The Staff Engineer provides guidance on preparing the DD Form 1391 and other program documents.
8. The Programs Branch prepares the DD Form 1391 and 1391C in accordance with Chapters 7 and 8 of AR 415-15 and the following documents as required by Chapter 4 of AR 415-15:
 - a. DO Form 1390 and 1390C
 - b. Economic Analysis
 - c. General Site Plan
 - d. New Start Study (paragraph 3-4, AR 235-5)
 - e. Completion and approval of PDB1.
9. The Installation Commander approves the DD Form 1390.

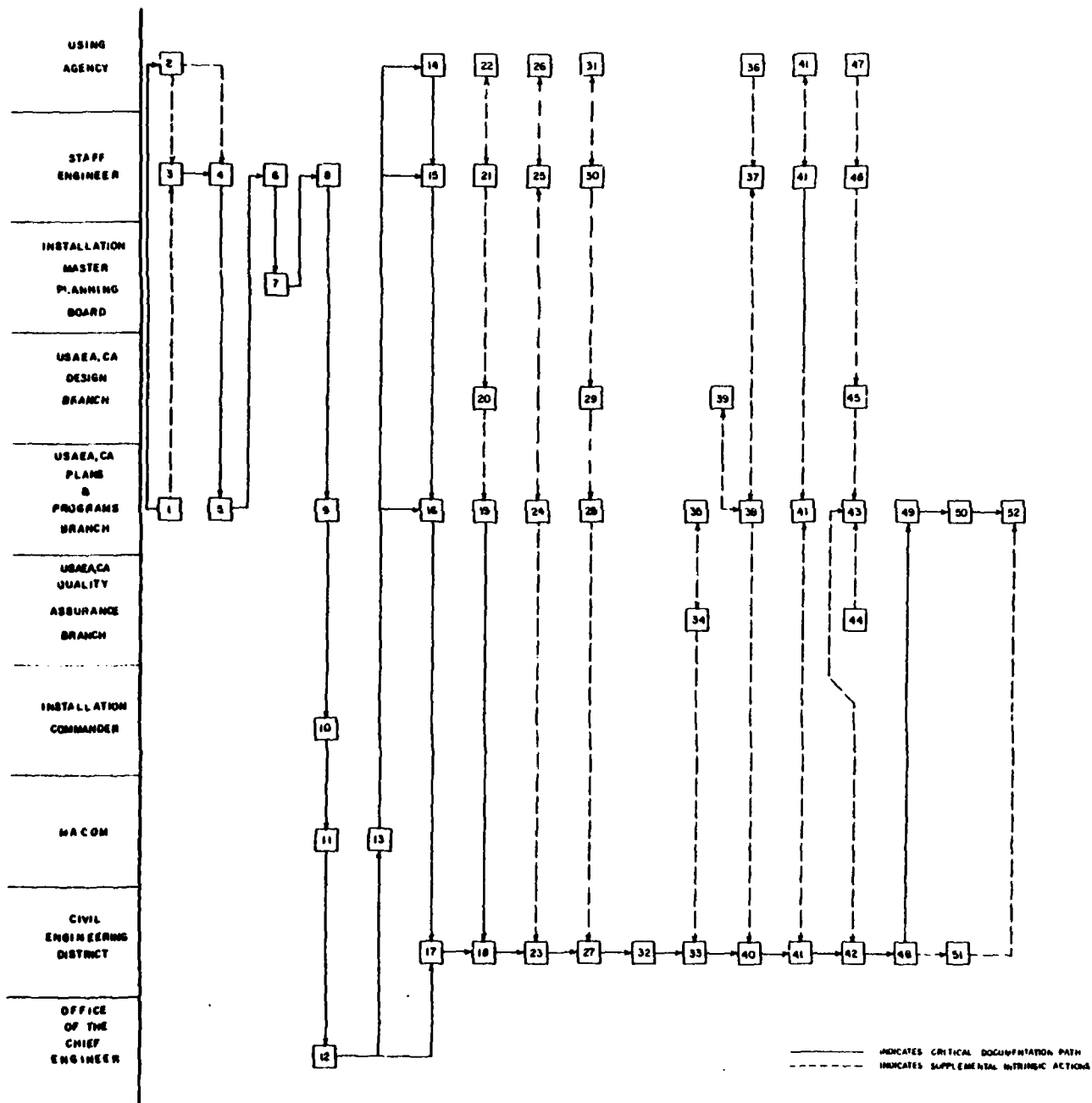


Figure C1. MCA project procedures.

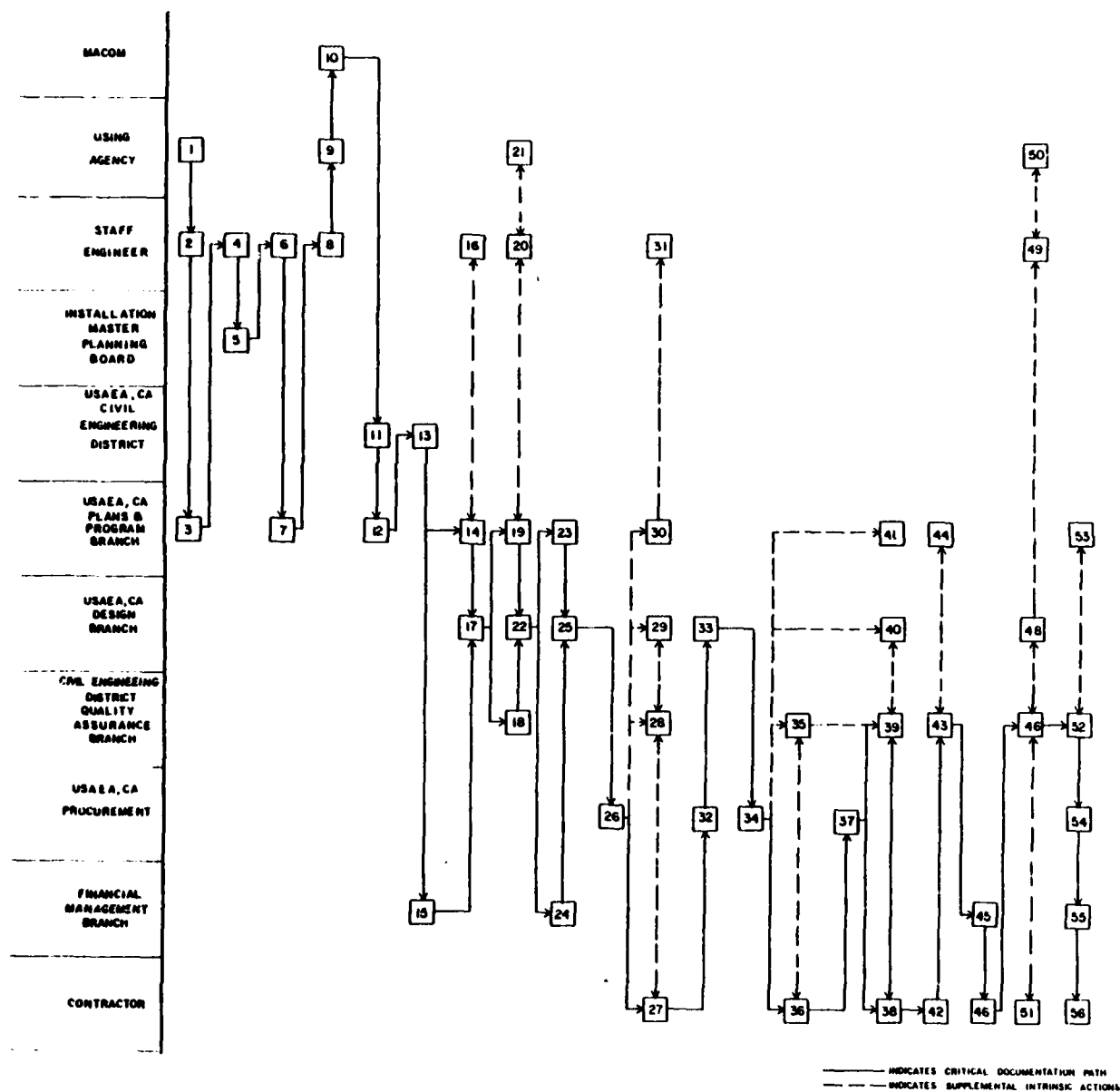


Figure C2. Exigent minor MCA, USAEA, CA design and construction contract procedure.

10. The MACOM reviews the documentation, selects programs, and establishes respective priorities for projects included in the 5-year plan.

11. OCE prepares the total MCA program and obtains Congressional approval and funding; provides funding and authorization documents to the District to execute the program; and notifies the MACOM of the approved project.

12. MACOM forwards notification to the Staff Engineer, the using agency,

13. The Programs Branch reviews the approved projects and forwards the PDB1 for the approved projects to the District.

14. The District prepares a design contract package and an agenda for a predesign conference.

15. The District holds the predesign conference with representatives of the using agency, the Staff Engineer, and USAEA,CA personnel in attendance.

16. The District awards the design contract, and the AE initiates the work. Questions from the AE are sent to the USAEA,CA to be resolved with the Staff Engineer and the using agency.

17. The District conducts periodic design reviews.

18. The Plans Branch reviews the AE's work at all stages and coordinates the review with other USAEA,CA elements, the Staff Engineer, and the using agency.

19. The District receives the final design package, provides a final review, and prepares a bid package; advertises for bids, evaluates bids, and awards a contract to the successful bidder; and initiates construction with a Notice to Proceed. Representatives from the USAEA,CA Quality Assurance Branch and Plans Branch visit the construction site and provide comments to the District/Area office.

20. The using agency may request a contract modification during the construction period if changes are needed.

21. The Staff Engineer coordinates the request for a contract modification.

22. The Plans Branch serves as the point of contact between the District and the using agency, evaluates the request for the modification, evaluates the effect on the contract, initiates the contract modification, and forwards it to the District for incorporation.

23. The District negotiates the change to the construction contract, incorporates the change into the contract, and the Contractor then accepts the change.

24. The Area Office initiates the acceptance inspection, prepares a list of corrections to be made, and provides instructions to the contractor.

25. The Plans Branch coordinates participation of the USAEA,CA, Staff Engineer and the using agency personnel in the acceptance inspection and in providing guidance to the Area Office.

26. The Area Office prepares a DD Form 1354 for the acceptance and transfer of real property.

27. The Plans Branch reviews the DD Form 1354 and provides a copy to the Real Property officer. Branch personnel initiate and coordinate the inspection of all warranty items 11 months after contract completion and direct corrective actions.

28. The District completes the as-built drawings and transmits them to the USAEA,CA within 1 year of contract completion.

29. The Plans Branch assures that the as-builts are received and that warranty inspections are completed.

Exigent Minor MCA Design and Construction Contract Procedure (Figure C2)

1. The using agency identifies the need for the project and prepares data needed for the DD Form 1391.

2. The Staff Engineer adds the proposed project to the Installation Master Planning Board agenda.

3. The Programs Branch prepares the charts, maps, and narrative on the project for presentation to the Installation Master Planning Board. The Branch also prepares the DD Form 1391.

4. The Staff Engineer approves the DD Form 1391 and schedules meetings of the Installation Master Planning Board.

5. The Board approves the project and sets its priority. Board action does not imply the use of a formal board action.

6. The Staff Engineer coordinates the preparation of the final DD Form 1391.

7. The Plans Branch prepares the final DD Form 1391 including the required sketches.

8. The Staff Engineer reviews the final submittal.

9. The using agency reviews the submittal.

10. The MACOM provides the final administrative and funding review.

11. The District receives the authorization and funding documentation, and examines the option to design and/or construct the project with the USAEA,CA.

12. The Plans Branch furnishes the option decision to the District.

13. The District forwards the design and construction funds to the USAEA, CA for project execution.
14. The FMB receives the funding authorization and notifies the Plans Branch.
15. The Plans Branch develops the plans, specifications, and Government estimate for the project. The Staff Engineer is notified of the initiation of design.
16. The Quality Assurance Branch performs a constructability review of the design and provides comments to the Plans Branch.
17. The Plans Branch coordinates the plans, specifications, and cost estimate with the Staff Engineer who is responsible for coordinating the work with the using agency. The documents are revised to reflect the review comments.
18. The FMB authorizes construction funds for the project.
19. The Plans Branch forwards the documentation, funding authorization, and a Purchase Request DA Form 3953 to Procurement.
20. Procurement prepares, issues, and distributes the solicitation for bids to prospective bidders. Copies are forwarded to the Plans Branch and the Staff Engineer.
21. The contractor prepares a bid in response to the solicitations.
22. The Quality Assurance Branch responds to all questions received from bidders with the assistance of the Plans Branch.
23. Procurement receives and reviews the bids.
24. The Plans Branch provides a technical evaluation of the bids when needed.
25. Procurement awards the contract and notifies the contractor and distributes copies of the contract.
26. The Quality Assurance Branch holds a pre-construction conference.
27. The contractor participates in the pre-construction conference and submits the required bonds.
28. Upon receipt of the bonds, Procurement issues the Notice to Proceed to the Contractor.
29. The Contractor performs the work required by the contract and submits periodic pay requests.
30. The Quality Assurance Branch exercises the COR authority in monitoring and inspecting the Contractor's performance, and maintains the

construction contract file. The Plans Branch provides technical assistance when needed.

31. The Quality Assurance Branch prepares and certifies interim pay estimates and obtains the needed approvals.

32. The Plans Branch reviews and approves the interim payments.

33. The Financial Management Branch (FMB) makes the interim payments to the contractor.

34. The contractor receives the interim payments and completes the contract work. Upon completion, the contractor submits a request for the final payment.

35. The Quality Assurance Branch coordinates and performs the final inspection. The Plans Branch, the Staff Engineer, and the using agency participate in the final inspection.

36. Upon completion of all checklist items, the Quality Assurance Branch forward the request to the Plans Branch.

37. The Plans Branch coordinates the final payment.

38. The FMB makes the final payment.

39. The contractor receives the final payment, completing all contract action.

Engineer Activity, Capital Area Financial Management Plan (Figure C3)

1. The using agency or customer will determine its maintenance requirements with assistance from USAEA,CA and submit the budget to higher authority with an information copy to the USAEA,CA Financial Management Branch.

2. The USAEA,CA Financial Management Branch will provide the customer with the needed assistance upon receipt of the budget documents and submit a revolving fund requirement for USAEA,CA activities to the Baltimore District.

3. Baltimore District will use the revolving fund to finance USAEA,CA activities and request additional revolving fund allocation when needed. Contracts and leases will be financed directly from O&MA program of reimbursable account.

4. OCE, acting upon the request from the Baltimore District, will make the appropriate adjustment in the revolving fund allocation.

5. Baltimore District will maintain all financial accounts in the Corps of Engineers Management Information System (COEMIS) for USAEA,CA activities.

6. The budget will be submitted to DA for funding through the normal budget cycle. When funding is available, it will be allocated to the requesting installations.

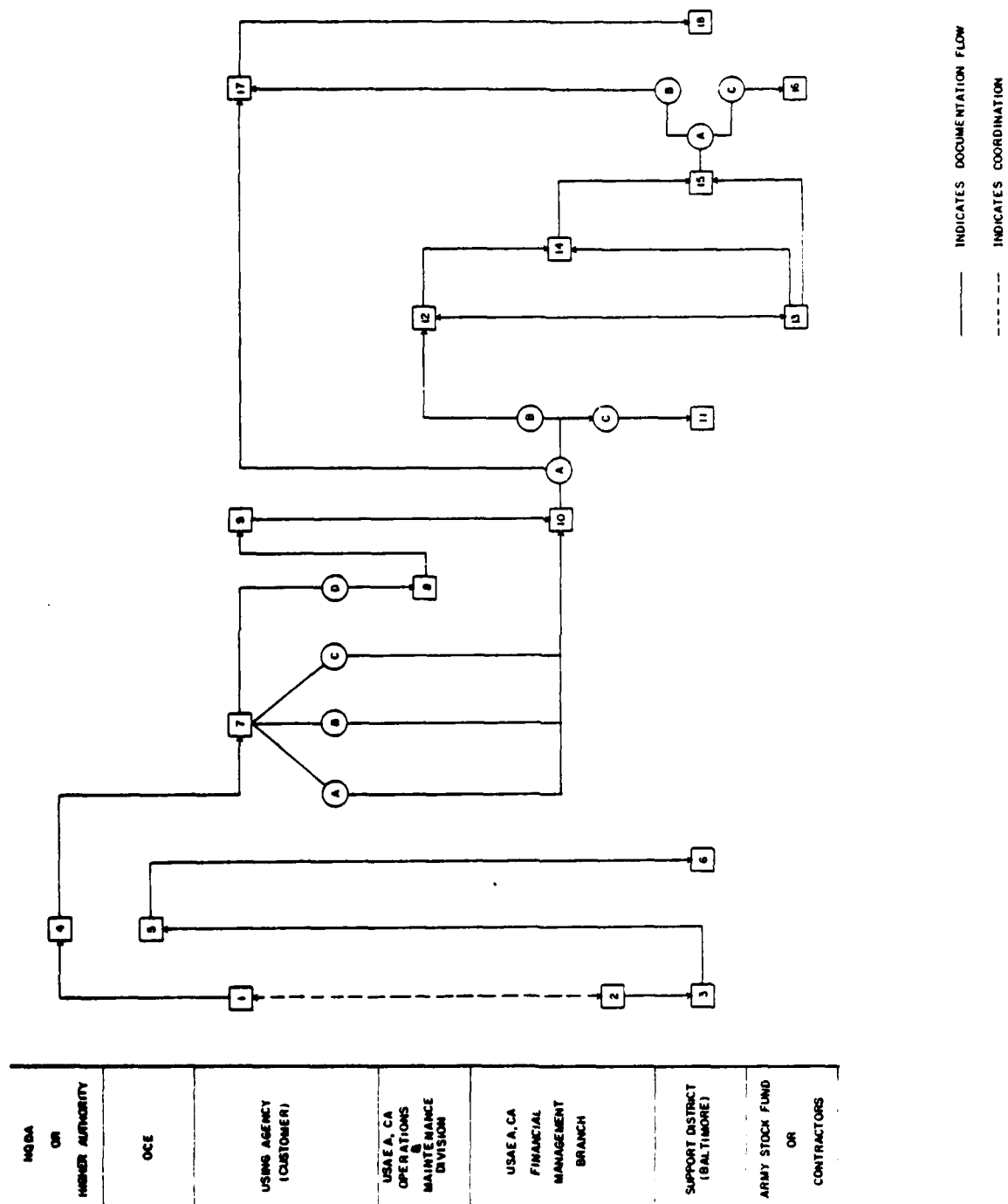


Figure C3. Engineer activity, capital area, financial management plan.

7. The requesting installation will accomplish the work through the USAEA,CA.

8. The USAEA,CA Financial Management Branch will process the IJO within USAEA,CA and provide the requestor with a cost estimate for the work described.

9. The customer or requestor will review the developed description of work to be done and its estimated cost. If the cost is acceptable and funds are available, the customer will submit a reimbursable order (DD Form 2544) for the needed services.

10. The USAEA,CA Financial Management Branch will take the following actions:

a. Process reimbursable orders for SO and SOO within USAEA,CA and if the work can be performed, accept the reimbursable order and send signed copies back to the customer/requestor.

b. Accept reimbursable orders for purchasing utilities and forward them to the Work Coordination Branch.

c. Forward reimbursable orders for contracts to the Baltimore District.

11. Upon receipt of the reimbursable order, Baltimore District will enter the transaction in the O&MA, P7 account.

12. The O&M Division will enter the request data into the IFS, perform the work, or provide the services, including obtaining the needed supplies.

13. The Army Stock Fund or the contractors providing supplies will render a bill for utilities or supplies to the USAEA,CA or to the Baltimore District for payment.

14. The FMB will provide IFS input data on contractor, utilities, and heating oil costs and transfer the data to the Baltimore District.

15. Baltimore District will (a) process IFS data into the COEMIS using the interface program, (b) bill the customers for the services provided, and (c) pay the vendors and suppliers. Payment for in-house cost is made from the O&MA P7 accounts; vendors and suppliers from the revolving account; and contract/leases from the O&MA, P7 account.

16. The Army Stock Fund and contractors will receive payments from the Baltimore District.

17. The customer/requestor will pay the bills furnished by the Baltimore District.

18. Baltimore District will receive the payment and reimburse the appropriate accounts and record the transactions.

Procedures for Processing Reimbursable Orders (DD Form 2544) (Figure C4)

1. The using agency will determine the real property maintenance activity requirements in coordination with the USAEA,CA.

2. The O&M Division Chief, USAEA,CA, coordinates the RPMA requirements with the using agencies.

3. The using agency takes the following actions:

a. Forwards quarterly reimbursable orders (DD Form 2544) for Service Orders (SO) and Standing Operating Orders (SOO) to the Work Coordination Branch (work reception).

b. Forwards reimbursable orders for purchase utilities to the Financial Management Branch.

c. Forwards reimbursable orders for equipment and service obtained by contract to the Work Coordination Branch (work reception).

d. Forwards reimbursable orders for Individual Job Orders (IJO) that are less than \$5000.

4. The Work Coordination Branch receives the reimbursable orders and determines if the work is adequately defined and forwards it to the Chief of the O&M Division.

5. The Division Chief reviews and returns the reimbursable order to the Work Coordination Branch (planner/estimator).

6. The planner/estimator verifies that the work can be done and validates the estimated amount of the reimbursable order. The planner/estimator submits the reimbursable order to the Financial Management Branch (FMB) with an indication that the work can be performed by the end of the fiscal year.

7. The FMB accepts the reimbursable order and takes the following actions:

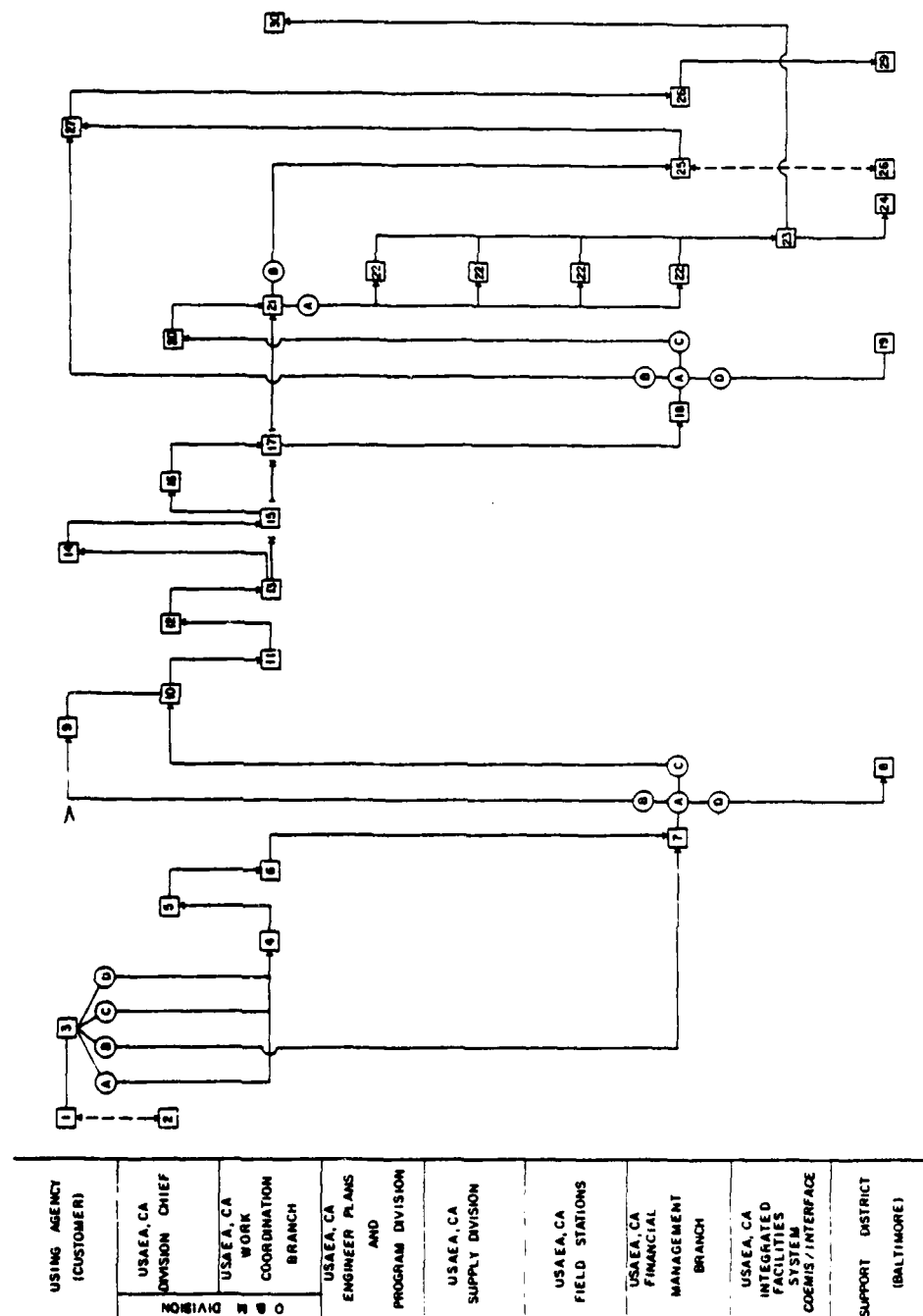
a. Returns two signed copies of the reimbursable order to the using agency.

b. Provides a copy of the order to the O&M Division. The IJO is then processed in accordance with step 21 described below.

c. Submits original to the supporting District.

8. The District receives the reimbursable order and assigns it a COEMIS and O&MA reimbursable appropriation number, and establishes an account in the COEMIS database.

9. The using agency may submit a work request, which will be processed.



10. The Chief of the O&M division receives the work request and forwards it to the Work Coordination Branch (planner/estimator).

11. The planner/estimator verifies that the work can be performed and prepares an estimate of the work. The estimate is submitted to the Chief of the O&M Division for approval.

12. The Chief of the O&M Division approves the estimate and returns it to the Work Coordination Branch.

13. The planner/estimator records the amount of the estimate and subtracts it from the amount available under the "blanket" reimbursable order. The estimate is then forwarded to the using agency. Work on this work order will proceed with step 21 discussed below.

14. If the using agency prepares a reimbursable order for an IJO of \$5000 or more, it will be processed in the following manner.

15. The Work Coordination Branch receives the reimbursable order for an IJO, determines if the order is adequately defined, and forwards it to the Chief of the O&M Division for review.

16. The Chief of the O&M Division reviews and returns the work order to the Work Coordination Branch (planner/estimator).

17. The planner/estimator verifies that the work can be done and validates the estimated amount of the order. The reimbursable order is then forwarded to the FMB.

18. The FMB accepts the reimbursable order for the IJO and takes the following actions:

- a. Assigns a four-digit control number to the order.
- b. Returns two signed copies of the order to the using agency.
- c. Provides a copy of the order to the Chief, O&M Division.
- d. Forwards the original of the order to the Support District.

19. The Support District assigns a COEMIS number and an O&MA reimbursable appropriation number to the order and establishes an account in the COEMIS database.

20. The Chief, O&M Division, provides a copy of the reimbursable order to the Work Coordination Branch.

21. The Work Coordination Branch takes the following actions:

- a. Prepares a work order; inputs the work order and reimbursable order data into IFS; maintains an informal ledger (commitment account) or uses the IFS/COEMIS enhancement to control funding; and processes the work order through the cycle to get the work done.

b. Determines the cost of remaining work or service to be provided under the reimbursable order as the expiration date of the order approaches, and provides the information to FMB.

22. Cost data are collected and entered into IFS as the work is performed.

23. The data are processed in the system, and actual cost data are furnished to both the Support District and the Work Coordination Branch.

24. The Support District bills the using agency based on the output of IFS/COEMIS.

25. The FMB coordinates the status of reimbursable orders with the Support District and notifies them of the final cost of the order and the remaining funds in the reimbursable order.

26. The Support District coordinates with FMB to determine the status of the reimbursable order.

27. The using agency may submit an amendment to withdraw excess funds or to close out a reimbursable order.

28. The FMB accepts the amendment to the reimbursable order and provides a copy to the Support District.

29. The Support District adjusts the records and reflects the withdrawal of excess funds.

30. The Work Coordination Branch makes appropriate adjustments to the commitment account to reflect the actual job order cost.

Financial Management of Contracts Greater than \$10,000 (Figure C5)

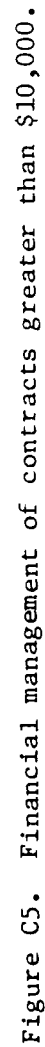
1. The Plans Branch of the Engineering Plans and Programs Division initiates the work by taking the following action:

a. Prepares a Purchase Request Commitment (PRC) document and obtains a PRC number from FMB.

b. Prepares the solicitation and forwards it to the Procurement Division of the Support District.

2. The FMB reviews the PRC and verifies that the reimbursable order covering the work has been received, certifies the availability of funds, and records the commitment in the informal ledger. The FMB submits the PRC to the F&A Branch of the Support District.

3. The F&A Branch records the commitment and forwards the purchase request to the Procurement Branch.



4. The Procurement Branch takes the following actions:
 - a. Distributes the solicitation, receives quotations, and awards the contract.
 - b. Provides four copies of the resulting contract to USAEA,CA (FMB).
 - c. Provides the obligation copy of the contract to the F&A office.
5. The FMB establishes a contract file and records the obligation and contractual data into the IFS. The FMB provides a copy of the contract to the Quality Assurance Branch and to the Plans Branch of the USAEA,CA.
6. The Support District F&A Branch obligates the contractual amount.
7. The vendor or contractor submits invoices for partial progress or final payment.
8. The Quality Assurance Branch reviews progress being made on the contract, prepares the receiving report, which certifies that service has been received, and forwards it with the invoice for approval to the Plans Branch.
9. The Plans Branch reviews and approves the receiving report and submits the documents to FMB.
10. The FMB reviews the documents, inputs actual cost data into IFS, and forwards the package to the Support District.
11. The F&A Branch of the Support District takes the following actions:
 - a. Prepares the disbursement document and makes a payment to the vendor, citing the appropriate O&MA P7 reimbursable account.
 - b. Forwards a copy of the disbursement document to USAEA,CA (FMB).
 - c. Processes cost data from the IFS/COEMIS interface and bills the using agency.
12. The vendor receives payment from the Support District.
13. The FMB receives a copy of the disbursement document.
14. Upon receipt of a bill, the using agency pays the Support District for the RPMA services provided. The F&A Branch of the Support District receives the payment for RPMA services and reimburses the O&MA P7 Reimbursable Account.

Financial Management of Contracts Less Than \$10,000 (Figure C6)

1. The Family Housing Branch of USAEA,CA or any other activity within the organization other than the Housing Management Division prepares the Purchase Request and Commitment document (PRC) and submits it to the FMB.

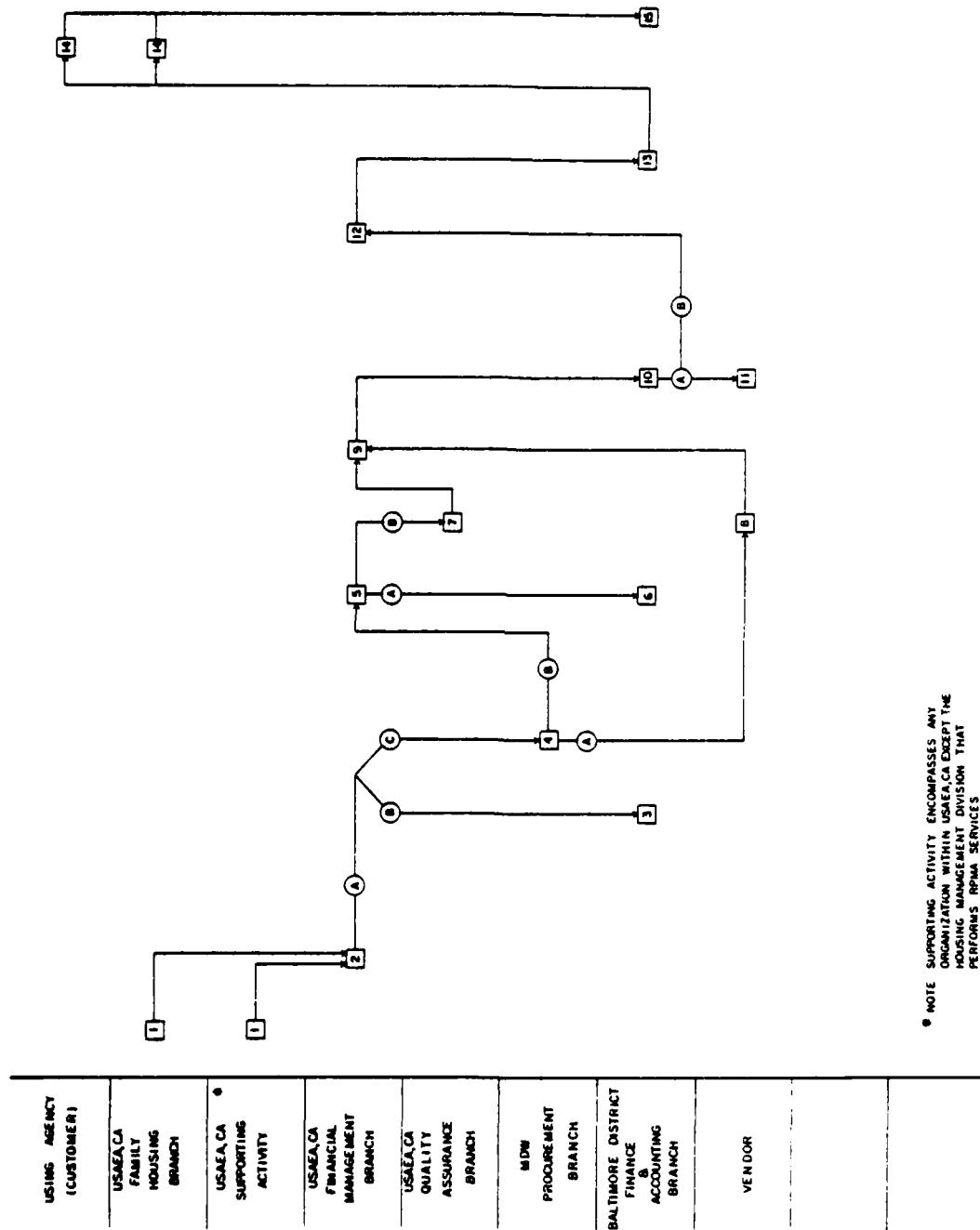


Figure C6. Financial management of contracts less than \$10,000.

2. The FMB takes the following actions:
 - a. Certifies the availability of funds and maintains an informal commitment ledger.
 - b. Forwards a copy of the PRC to the Support District.
 - c. Forwards a copy of the PRC to the MDW Procurement Branch.
3. The Support District F&A Branch records the commitment of funds.
4. The MDW Procurement Branch takes the following actions:
 - a. Prepares the solicitation, receives quotations, and awards the contract.
 - b. Submits four copies of the contract to the FMB.
5. The FMB takes the following actions:
 - a. Prepares the contract file, inputs contractual cost data into IFS, posts obligation to commitment ledger, and submits the obligation copy of the contract to the Support District.
 - b. Submits one copy of the contract to the Contracting Officer's Representative (COR)/Quality Assurance Branch (QAB).
6. The F&A Branch of the Support District obligates the contractual amount.
7. The QAB authenticates receipt of supplies/services, prepares the receiving report, and submits the receiving report to the FMB.
8. The vendor submits an invoice for supplies/services to the FMB.
9. The FMB reviews the receiving report and invoice, forwards the receiving report and invoice to the Support District, and inputs the data into the IFS.
10. The F&A Branch takes the following action:
 - a. Prepares the disbursement document and makes the payment to the vendor, citing the appropriate O&MA P7 reimbursable account.
 - b. Forwards a copy of the disbursement document to FMB.
11. The vendor receives the payment.
12. The FMB prepares the distribution report of contractual cost for fixed-type services (refuse/custodial) and forwards the report to the Support District to verify proper allocation of contract cost.
13. The F&A Branch of the Support District processes the IFS cost data and bills the using agency.

14. The using agency makes payment.

15. The F&A Branch of the Support District receives the payment and reimburses the O&MA P7 reimbursable account.

Financial Management of Stock Fund Supplies (Figure C7)

1. The Property Control Branch requests the supplies from the Stock Fund.

2. The Stock Fund takes the following actions:

a. Provides the requested supplies to USAEA,CA.

b. Submits monthly bills (SF1080) by way of SAILS to USAEA,CA for Stock Fund supplies. USAEA,CA is treated as an off-post customer, and the fund activity code is used on requisitions. The Storage Branch receives the supplies and forwards a notice of receipt to the Property Control Branch. The Storage Branch issues supplies to the customers in accordance with the material release order (MRO) provided by the account, and forwards a copy of Form 3122 to the Property Control Branch.

3. The Property Control Branch records receipt of the supplies, and inputs cost by work order number into IFS as the supplies are issued for RPMA services. The F&A Branch of the Support District processes the cost data from IFS/COEMIS and bills the using agency for the supplies.

4. The Stock Fund receives payment for the supplies provided.

5. The using agency makes payment for the RPMA services (including supplies).

6. The F&A Branch of the Support District receives payment from the using agency and reimburses the O&MA P7 reimbursable account.

Financial Management of the Purchase and Sale of Utilities (Figure C8)

1. The Utility Sales Officer (Utilities Branch, O&M Division) takes the following actions:

a. Establishes rates for utilities and submits them for approval. Rates are reviewed and updated annually or as deemed necessary.

b. Provides FMB with the months to bill heating and air conditioning services, and provides guidance in problem areas.

2. The Army Power Procurement Officer Representative reviews and approves the utility rates. The approved rates are forwarded to FMB.

3. The using agency submits a reimbursable order for the estimated utility cost to the FMB.

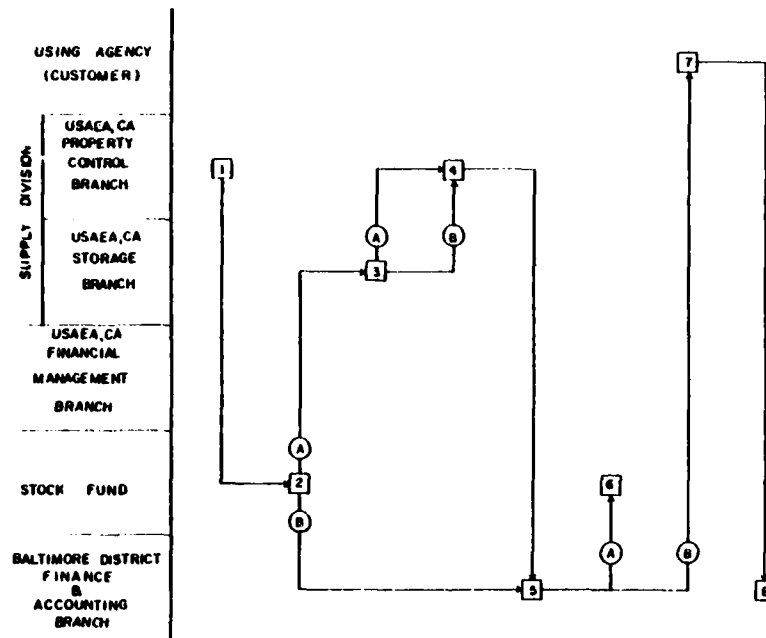


Figure C7. Financial management of stock fund supplies.

4. The RPMM provides monthly meter reading and consumption estimates for the applicable utilities to FMB.

5. The OR provides the FMB with the billing amounts for utilities services (refuse collection and custodial services) obtained by contract.

6. Vendors and suppliers submit their utility invoices to the FMB.

7. The FMB takes the following actions:

a. Accepts the reimbursable order from the using agency and submits the original to the Support District.

b. Receives the utility invoices from the vendors, prepares the receiving report, and submits the invoice and receiving report to the Support District for payment. Records utility cost and consumption data.

c. Computes monthly bill for each customer, using approved rates and meter readings or consumption estimates. Inputs cost and consumption data into IFS. Prepares distribution report showing total invoice amount as distributed to customers. Provides distribution report to the Support District.

8. The F&A Branch of the Support District makes payment to the vendor for the utility services using the revolving fund.

a. Provides a copy of the disbursement document for utilities to FMB

b. Receives utilities distribution report and uses IFS/COEMIS interface tape to bill the using agency for utility services.

9. The using agency pays the support District for utility services.

10. The vendor receives payment for the utility services provided.

11. The FMB receives the disbursement document for utilities.

12. The F&A Branch, Support District receives payment from the using agency for the utility services and reimburses the revolving fund.

Non-MCA Under \$10,000 (Option 1) Contracts In-House Design and Construction Contract Procedure (Figure C9)

1. The Plans and Programs Branch prepares a DF requesting a prioritized list of projects, including BMAR and new projects.

2. The Staff Engineer coordinates the request with the using agency.

3. The using agency prepares a prioritized list of all projects (BMAR and new).

4. The Staff Engineer reviews and validates each using agency's request and prepares a consolidated list of projects for the installation.

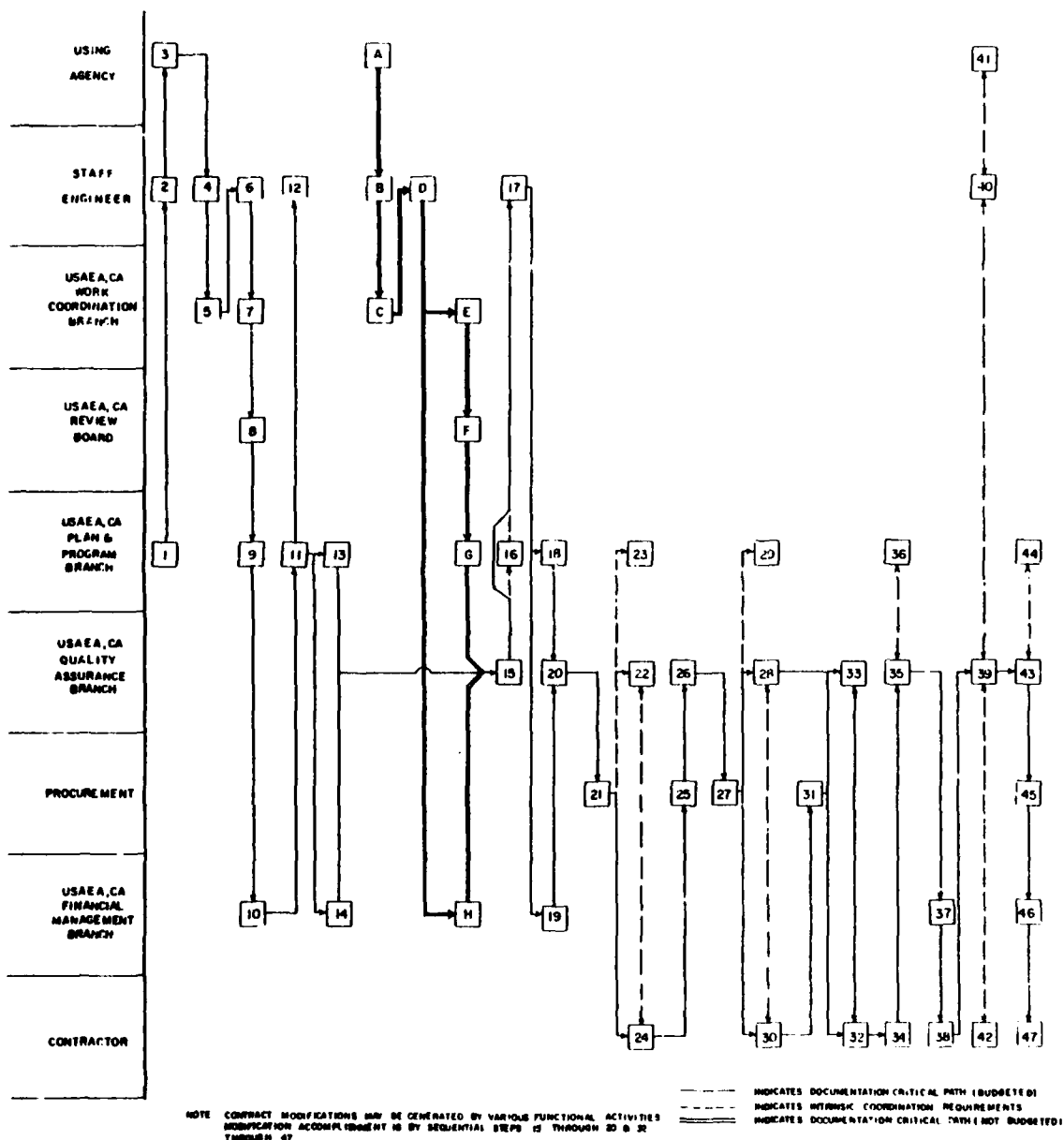


Figure C9. Non-MCA under \$10,000 (option 1) contracts, in-house design and construction contract procedure.

5. The Work Coordination Branch reviews the projects list and prepares the projected cost for each project (assistance from the Design Branch may be required).

6. The Staff Engineer prepares the installation's annual work plan and budget (includes convening the installation Master Planning Review Board when required) and provides the prioritized list of projects to the Work Coordination Branch.

7. The Work Coordination Branch determines the projects to be done in-house and prepares the USAEA,CA annual work plan for these projects.

8. The USAEA,CA Review Board prioritizes the work to be done by construction contract.

9. The Plans and Programs Branch prepares an annual work plan for projects that will require construction contracts.

10. The FMB prepares the annual budget, using work plans from actions 7 and 9 above.

11. The Plans and Programs Branch reviews the budget and coordinates with the Staff Engineer.

12. The Staff Engineer obtains funds and obtains authorization for design and/or construction.

13. The Plans and Programs Branch reviews the funding and authorization, and requests the Design Branch to start design.

14. The FMB validates funding and provides authorization to start design through the following steps:

a. Receives work requests not in the annual work plan during any time of the year.

b. Reviews these requests and consolidates them with requests from other using agencies, if any.

c. Reviews requests and prepares a projected cost for the projects.

d. Prioritizes projects and obtains funding and authorization.

e. Determines if the projects can be done with in-house forces.

f. Prioritizes projects to be done by construction contracts.

g. Reviews funding and authorization. Requests Design Branch to initiate design.

h. Validates funding and issues authorization to begin design.

15. The Quality Assurance Branch prepares designs, estimates, and specifications, and performs the constructability review.

16. The Plans and Programs Branch coordinates the work with the Staff Engineer.

17. The Staff Engineer provides funds for construction (if not already done) and authorizes or obtains authorization for construction.

18. The Plans and Programs Branch reviews funding and construction authorization.

19. FMB validates funding and construction authorization.

20. The Quality Assurance Branch assembles the funding, authorization documents, technical package, and purchase request or contract modifications.

21. Procurement prepares, issues, and distributes the solicitation for contract.

22. The Quality Assurance Branch answers contractors' technical and performance questions during the solicitation period, and coordinates contractor site visits.

23. The Plans and Programs Branch coordinates the technical and performance queries from the contractors.

24. The contractors prepare and submit their bids.

25. Procurement receives and opens bids, and obtains necessary reviews and award recommendations.

26. The Quality Assurance Branch prepares a technical evaluation of bids.

27. Procurement evaluates the bids, awards the contract, and distributes contract documents.

28. The Quality Assurance Branch holds preconstruction conferences with the contractor. Other staff members and the Staff Engineer may attend as required.

29. The Plans and Programs Branch coordinates the preconstruction conference.

30. The contractor participates in the preconstruction conference and obtains and submits the necessary bonds to procurement.

31. Procurement receives the bonds, insurance, and signed contracts from the contractor, and issues the notice to proceed.

32. The contractor performs the work in accordance with the contract specifications.

33. The Quality Assurance Branch exercises COR authority in monitoring and inspecting the contractor's performance and maintains the construction

34. The contractor prepares and submits interim pay requests.

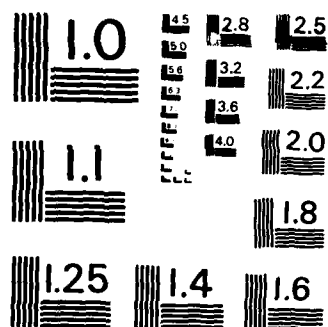
RPMA (REAL PROPERTY MAINTENANCE ACTIVITIES)
CONSOLIDATION ACTIVITIES IN T. (U) CONSTRUCTION
ENGINEERING RESEARCH LAB (ARMY) CHAMPAIGN IL
R BLACKMON MAY 84 CERL-TR-P-156-VOL-1 F/G

UNCLASSIFIED

R BLACKMON MAY 84 CERL-TR-P-156-VOL-1

F/G 5/1

NL



MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS - 1963 - A

35. The Quality Assurance Branch prepares and certifies interim pay estimates, coordinates with the Plans and Programs Branch, and obtains approval of interim payments. (Authorization for interim payments should preferably be within USAEA,CA, Chief, Engineer Plans and Services Division.)

36. The Plans and Programs Branch coordinates the interim payments.

37. FMB makes interim payments.

38. The contractor receives interim payments, completes the contract work, and submits an invoice for final payment.

39. The Quality Assurance Branch coordinates and performs the final inspection.

40. The Staff Engineer participates in the final inspection.

41. The using agency participates in the final inspection.

42. The contractor participates in the final inspection.

43. The Quality Assurance Branch prepares and certifies the final payment.

44. The Plans and Programs Branch coordinates the final payment.

45. The Procurement contracting officer approves the final payment.

46. FMB makes the payment.

47. The contractor receives the final payment for the contract.

Non-MCA Over \$10,000 and Under \$10,000 (Option 2) Contracts, In-House Designing Contract Procedure (Figure C10)

1. The Plans and Programs Branch prepares a DF requesting a prioritized list of projects, including BMAR and new projects.

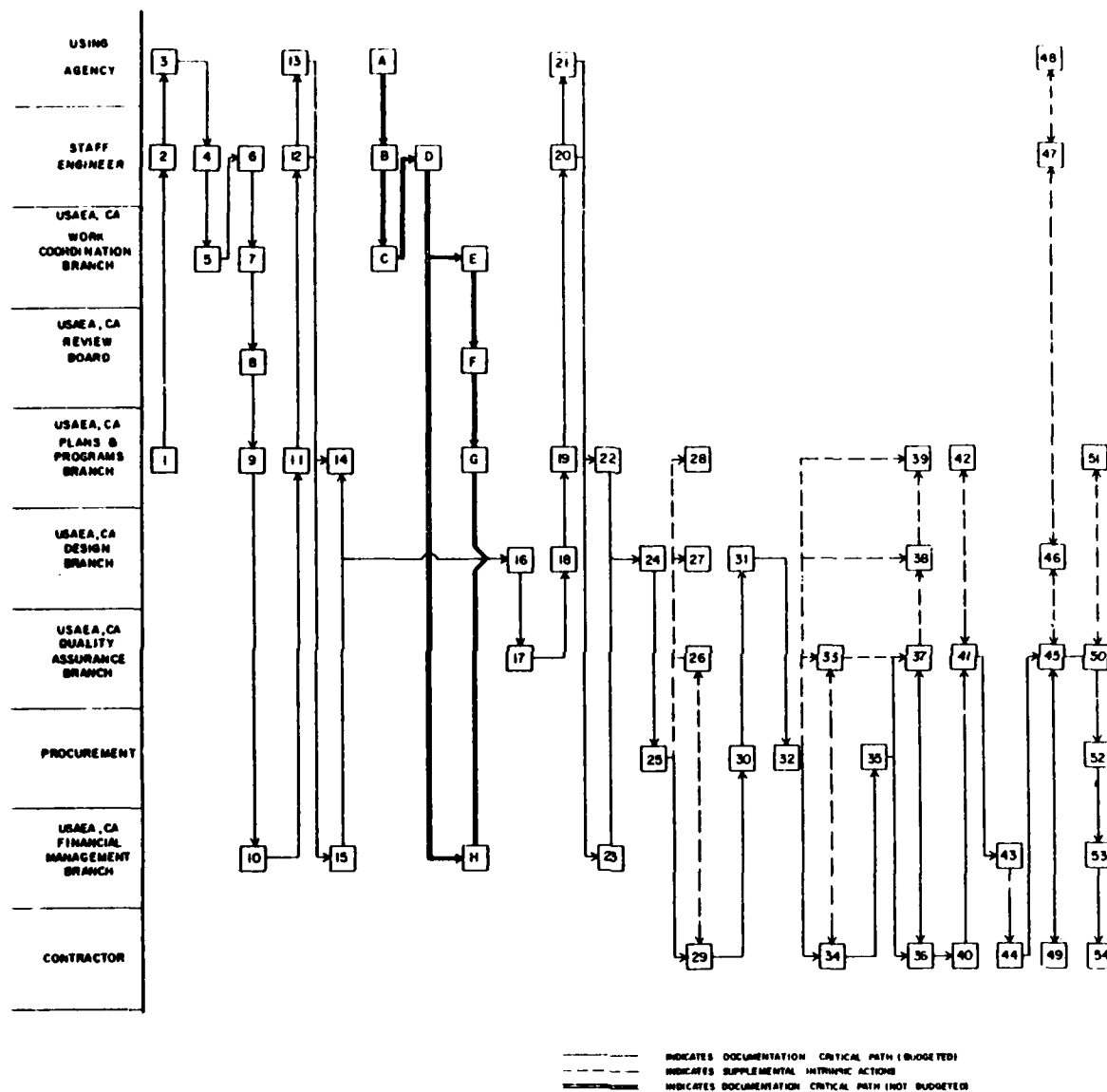
2. The Staff Engineer coordinates the request with the using agency.

3. The using agency prepares a prioritized list of all projects (BMAR and new).

4. The Staff Engineer reviews each using agency's request for validity and prepares a consolidated list of projects for the installation.

5. The Work Coordination Branch reviews the list and prepares the projected cost for each project (assistance from the Design Branch may be required).

6. The Staff Engineer prepares the installation annual work plan and budget (includes convening the installation Master Planning Review Board when



NOTE: CONTRACT MODIFICATION REQUIREMENTS MAY BE GENERATED BY VARIOUS FUNCTIONAL ACTIVITIES. MODIFICATION ACCOMPLISHMENT IS BY SEQUENTIAL STEPS 16 THROUGH 25 AND 35 THROUGH 54.

Figure C10. Non-MCA over \$10,000 and under \$10,000 (option 2) contracts, in-house design and construction contract procedure.

required) and provides the prioritized list of projects to the Work Coordination Branch.

7. The Work Coordination Branch determines the projects to be done in-house and prepares the USAEA,CA annual work plan to do the work.

8. The Review Board prioritizes work to be done by construction contracts.

9. The Plans and Programs Branch prepares the annual work plan for doing the work by construction contract.

10. The FMB prepares the annual budget (using the work plan developed by others).

11. The Plans and Programs Branch reviews the budget and coordinates it with the Staff Engineer.

12. The Staff Engineer obtains the needed funds and authorizes or obtains authorization for design and/or construction.

13. The using agency provides funds for NAF or reimbursable projects.

14. The Plans and Programs Branch reviews the funding and authorization, and requests the Design Branch to start design.

15. The FMB validates funding and issues authorization to start design.

a. Receives request-work during the year that is not in the annual budget.

b. Reviews requests and consolidates them with other using agencies' requests.

c. Reviews requests and prepares the projected cost of the projects.

d. Prioritizes projects and obtains funding and authorization.

e. Determines if the projects can be done with in-house forces.

f. Prioritizes projects to be done by construction contract.

g. Reviews the funding and authorization, and requests the Design Branch to start design.

h. Validates funding and issues the authorization to start design.

16. The Design Branch prepares the design, estimate, and specifications for projects and project modifications.

17. The Quality Assurance Branch performs the constructability review and coordinates changes with the Design Branch.

18. The Design Branch prepares the final plans, specifications, and estimates for projects and project modifications.
19. The Plans and Programs Branch coordinates the project with a Staff Engineer.
20. The Staff Engineer provides funds for construction (if not already done) and authorizes or obtains authorization for construction and project modification.
21. The using agency provides the funds for NAF or reimbursable projects and modifications.
22. The Plans and Programs Branch reviews the funding, construction, and modification authorization.
23. FMB validates the funding authorization documents.
24. The Design Branch assembles funding, authorization documents, and the technical package, and requests procurement or contract modification.
25. Procurement reviews the documents and distributes solicitation or modifications.
26. The Quality Assurance Branch answers the contractors' queries during this solicitation period.
27. The Design Branch answers and/or helps the Quality Assurance Branch answer contractors' queries during the solicitation period and coordinates the contractor site visits.
28. The Plans and Programs Branch coordinates the assistance within the USAEA,CA.
29. The contractor prepares and submits the bid.
30. Procurement receives and opens the bids.
31. The Design Branch prepares a technical evaluation of the bids when required.
32. Procurement evaluates the bids and awards the contract.
33. The Quality Assurance Branch holds preconstruction conferences with the contractor. Other USAEA,CA and Staff Engineers may attend as required.
34. The Contractor participates in the preconstruction conference and obtains and submits the bonds required by Procurement.
35. Procurement receives the bonds and required insurance from the contractor, obtains the necessary reviews, and issues the Notice to Proceed.
36. The contractor performs the work in accordance with the contract.

37. The Quality Assurance Branch exercises the COR authority in monitoring and inspecting the contractor's performance and maintains the construction contract file.

38. The Design Branch provides technical assistance to the Quality Assurance Branch during construction when needed.

39. The Plans and Programs Branch coordinates any technical assistance.

40. The contractor prepares and submits interim pay requests.

41. The Quality Assurance Branch prepares and certifies the interim pay estimates, coordinates with the Plans and Programs Branch, and obtains approval of interim payments. (Authorization for interim payments is preferably within USAEA,CA, Chief, Engineer Plans and Services Division.)

42. The Plans and Programs Branch coordinates the interim pay requirements.

43. FMB makes the interim payments.

44. The contractor receives the interim payments, completes the contract work, and submits the final bill.

45. The Quality Assurance Branch coordinates and performs the final inspection.

46. The Design Branch helps the Quality Assurance Branch conduct the final inspection.

47. The Staff Engineer participates in the final inspection.

48. The using service participates in the final inspection.

49. The contractor participates in the final inspection.

50. Procurement prepares and certifies the final payment.

51. The Plans and Programs Branch coordinates the final inspection and payment.

52. Procurement approves the final payment.

53. FMB makes the payment.

54. The contractor receives final payment.

USAEA,CA Open-Ended AE Design Contract Procedures (Figure C11)

1. The Design Branch prepares a request for A/E contract and the requests for funding.

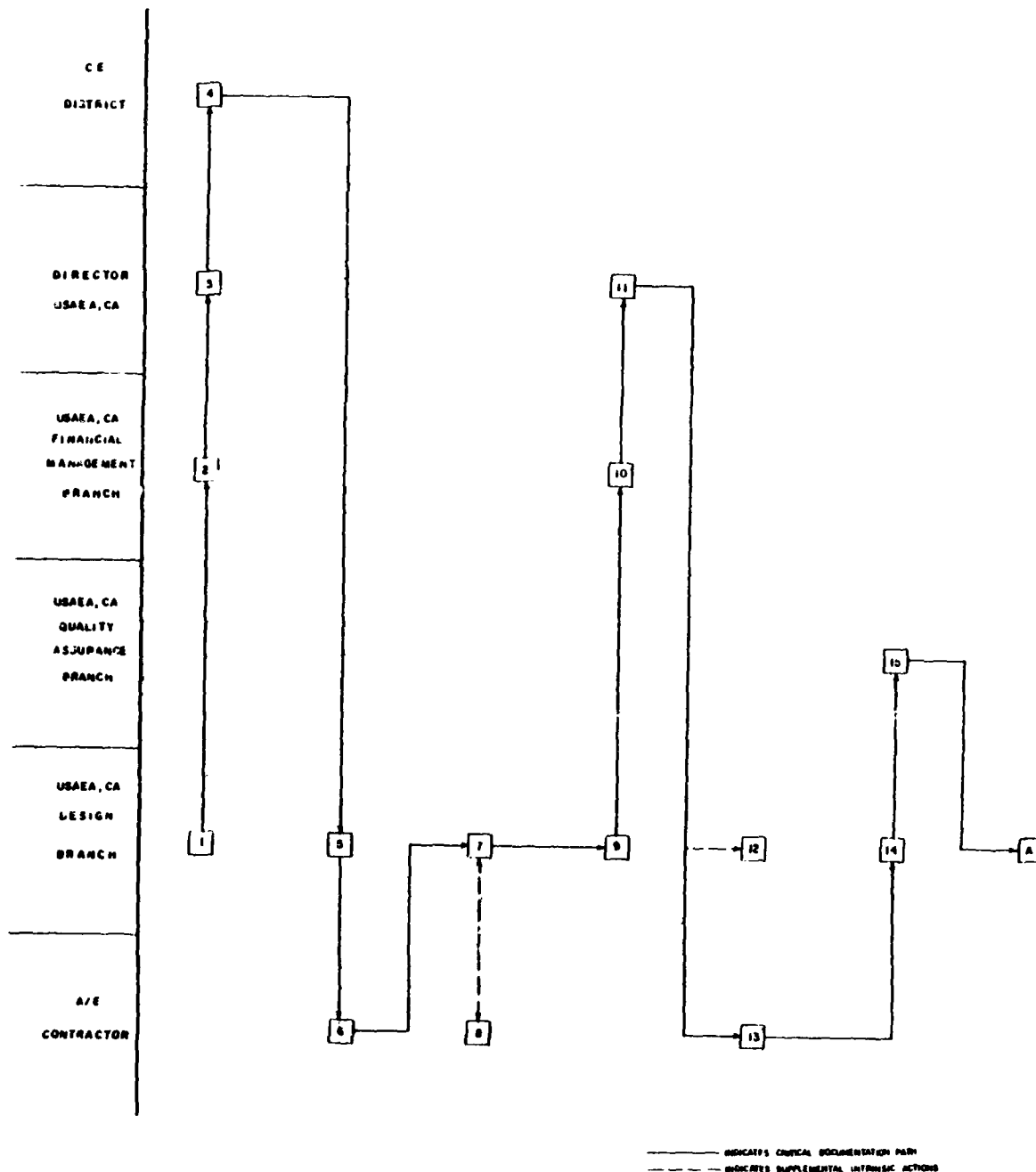


Figure C11. USAEA, CA open-ended AE design contract procedures.

2. FMB prepares the DA Form 2544 and obtains the needed signatures; this includes funding for CE District cost, as well as the cost of each work order to be performed under the A/E contract.

3. The Director, USAEA,CA, signs the request for A/E contract concurrence.

4. The CE District takes the following actions:

a. Procures A/E contract services

b. The Division Engineer or Deputy is assigned as a contracting officer (CO), the Director of USAEA,CA acts as the Resident Contracting Officer (RCO), and the Chief, Design Branch, acts as the Contracting Officer Representative (COR).

5. The Design Branch receives the copy of the contract with the COR authority designation and takes the following action:

a. Receives the Scope of Work.

b. Requests proposal from the contractor.

c. Prepares the government estimate.

6. The A/E contractor prepares and submits a proposal.

7. The Design Branch takes the following actions:

a. Reviews the proposal.

b. Negotiates the work with the A/E.

c. Prepares a record of the negotiation, ENG Form 2180, Resume of Actual Negotiation Procedures, and Standard Form 30.

8. The A/E takes the following action:

a. Negotiates with the Design Branch.

b. Prepares ENG Form 2180a.

c. Signs Standard Form 30.

9. The Design Branch requests funds transfer authorization.

10. FMB prepares and obtains concurrence for DA Form 2544.

11. Director, USAEA,CA, signs Standard Form 30 and delivers it to the A/E with a Scope of Work; a copy is forwarded to the Design Branch.

12. The Design Branch receives a copy of the Work Order.

13. The A/E prepares plans, specifications, and cost estimates for construction and/or studies.

14. The Design Branch reviews plans, specifications, and estimates.

15. The Quality Assurance Branch performs constructability reviews.

16. Work beyond Step 15 will be in accordance with Figure C1. Steps 1 through 5(a) are procedures for procuring and for A/E open-end contract. Each Work Order will start at Step 5(b).

APPENDIX D:

DETAILED PROCESS--CITA (Now CA: COMMERCIAL ACTIVITIES PROGRAM)

The CITA process and organizational responsibilities were defined to ensure that the USAEA,CA would be fully prepared to do its assigned tasks. Two basic processes were diagrammed: (1) RPMA CITA Program Requirements, and (2) RPMA CITA Program Requirements for New Starts and Expansions.

Activities to be accomplished in each organization have been summarized for simplification. Several conventions have been adopted to simplify the narrative explanation of each chart. The District referred to throughout is the Baltimore District Office. Organizations not otherwise designated are part of the USAEA,CA. While fully given on the flowcharts, names of the various organizational elements may be abbreviated in the supporting narrative.

RPMA CITA Program Requirements (Figure D1)

1. The USAEA,CA identifies all CITA applicable functions each year.
2. The USAEA,CA develops appropriate CITA RPMA files.
3. The USAEA,CA prepares and submits an Annual CITA Inventory (ACI) by 15 December each year.
- 4.,5.,6. The ACI is reviewed by the Baltimore District, the North Atlantic Division Office, and OCE.
7. HQDA (DACS-DMA) maintains the Army Master CITA Functions Inventory files and receives annual revisions.
8. For planning purposes, the USAEA,CA must prepare and submit an RPMA 5-year CITA review schedule (5RS) by 15 December of each year.
- 9.,10.,11. The 5RS is reviewed by the District, the North Atlantic Division Office, and OCE.
12. HQDA (DACS-DMA) maintains the 5RS file and receives all annual revisions.
13. The USAEA,CA must submit a CITA Function Justification (CFJ) for the in-house retention of any RPMA functions that can be justified.
- 14.,15.,16. The CFJ is reviewed by the District, the North Atlantic Division, and OCE.
17. HQDA (DACS-DMA) consolidates the CFJ with the Army Master CITA Function files.
18. The USAEA,CA must prepare and submit, in accordance with the 5RS, a CITA-proposed action summary (CPAS) on each RPMA function that could be contracted. CPASs are required by 31 May of each year.



Figure D1. RPMA CITA program requirements, USAEA, CA.

19.,20.,21. The CPAS is reviewed by the District, the North Atlantic Division, and OCE.

22. HQDA (DACS-DMA) reviews and authorizes the development of a comparative cost analysis (CCA).

23.,24. OCE assumes approval authority for the CCA and forwards the authority to develop the CCA to the North Atlantic Division, and to the District for action.

25. The District satisfies the requirements of prior notification and initiates the CCA.

26. The District prepares the RPMA Statements of Work (SOW) for each identified RPMA function.

27. The District executes a management study to validate the in-house cost estimates.

28. The U.S. Army Audit Agency (AAA) reviews the management study on in-house cost estimates for validity and provides an opinion of the reasonableness of the cost estimates.

29. The District prepares to solicit bids for developing the commercial source cost estimate.

30. The Procurement Office identifies a satisfactory commercial source and gets it approved by the Contracting Officer.

31. The Procurement Office solicits bids for the contract in accordance with pertinent requirements of the Defense Acquisition Regulations.

32. The Procurement Office pre-award surveys are performed when appropriate.

33. Upon completion of the contract, the District prepares the decision summary for in-house or contractor performance (DSICP) of the identified functions.

34. The cost comparison form (CCF) in the DSICP is submitted to the Division for an independent review and validation of entries.

35. The Division reviews and validates the CCF entries.

36. The CCF and DSICP are forwarded for approval.

37. OCE verifies the calculations, reviews the study results, and either authorizes the Contracting Officer to proceed with the contract or to retain the work as in-house functions.

38. The District Procurement Office negotiates procurement with the contractor.

39. The District initiates the contract for RPMA functions and notifies HQDA through command channels.

40. The District initiates action to reduce the DFE organization as reflected in the plan and estimate.

41. The USAEA,CA Division and District initiate administrative appeals for any of the affected parties.

42. The Contracting Officer forwards all appeals to OCE for resolution.

43. OCE resolves all appeals and notifies HQDA (DACS-DMA).

RPMA CITA Program Requirements for New Starts and Expansions, USAEA,CA (Figure D2)

1. The USAEA,CA defines new functions which could be done by a CITA contractor or the need to expand functions already being performed by a CITA contractor, and requests that a Comparative Cost Analysis (CCA) be performed.

2. The District initiates the CCA.

3. The District prepares the Statements of Work (SOW) to include performance standards for each new start or expansion.

4. The District executes a management study to validate in-house cost estimates.

5. The Army Audit Agency reviews the estimates for validity and provides an opinion on the reasonableness of the estimates.

6. The District begins action to solicit bids.

7. The Procurement Office identifies a commercial source and gets it approved by the Contracting Officer.

8. The Procurement Office solicits bids for the contract in accordance with pertinent requirements of the Defense Acquisition Regulations.

9. Pre-award surveys are performed when appropriate.

10. Upon completion of the contract, the District prepares the decision summary for in-house or contractor performance (DSICP) of the identified functions.

11. The cost comparison form (CCF) in the DSICP is submitted to the Division Office for an independent review and validation of entries.

12. The Division reviews and validates the CCF entries.

13. The CCF and DSICP are forwarded to OCE for approval if a new start is involved or through OCE and HQDA (DACS-ASD/ASA) for review and HQDA DACS-DMA) for approval if an expansion is involved.

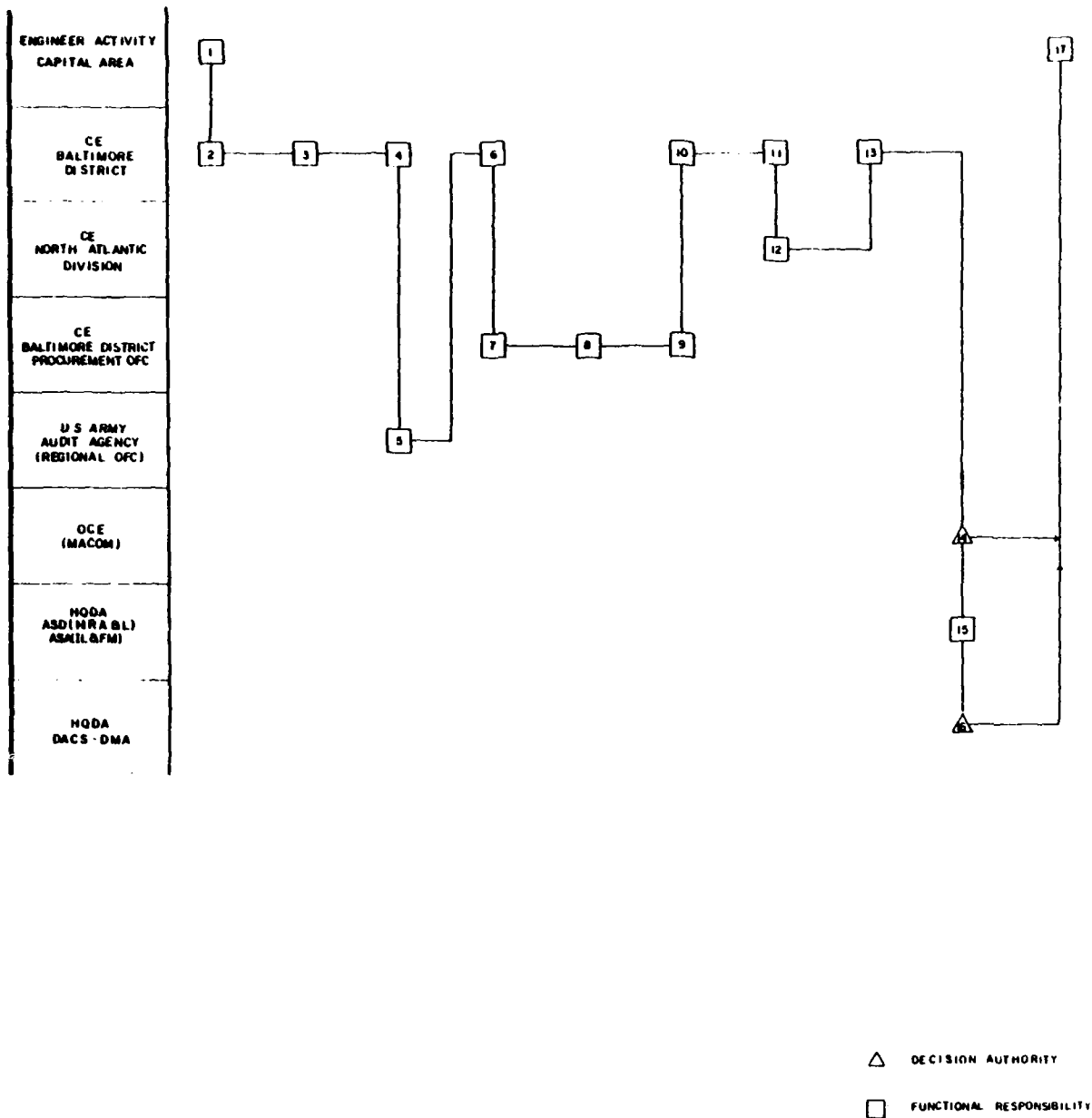


Figure D2. RPMA CITA program requirements for new starts and expansions, USAEA, CA.

14. OCE approves new starts and reviews requests for expansion.
15. HQDA (DACS-ASD/ASA) reviews requests for expansion.
16. HQDA (ACS-DMA) reviews and approves requests for expansion.
17. The USAEA,CA initiates the new start or expansion as authorized.

APPENDIX E:

TDA YARDSTICK COMPUTATIONS

Table E1

USAEA,CA Yardstick Computations

<u>Paragraph</u>	<u>Yard- Stick</u>	<u>Activity</u>	<u>Indicated Spaces</u>
01	610	Command/Director Strength $5 (500-250) = 5$	5
		Total	<u>5</u>
02		Special Assistants	
	214	Equal Employment Opportunity Military Population, Thousands 4.9 and below = 2	2
	33	Public Affairs Military Population, Thousands 2000 and under = 1	1
	NA	Commercial/Industrial-Type Activities Local Appraisal Staffing of one space is considered minimum essential	1
	240	Security Population, Thousands 3000 under = 1	1
	NA	Energy Local Appraisal One space is minimum essential for this program, which has high visibility at national lines	1
	NA	Environment Local Appraisal One space is minimum essential for a national program with high visibility	1
532		Acquisition Support	5
532		Action $4 - (500-450) \times 0.008 = 4.60$ This workload is the last available, and this staffing should be evaluated in 6 months when reliable workload has been developed	
		Total	<u>13</u>

Table E1. (Cont'd).

<u>Paragraph</u>	<u>Yard- Stick</u>	<u>Activity</u>	<u>Indicated Spaces</u>
	611	Administrative Office Strength of DAFE (500)	
	611	Administrative Chief $5 - (600-500) \times 0.005 = 4.40$	4
	222.3	Records Administrative and Forms Control $2 - (1500-500) \times 0.0008 = 1.20$	1
	222.4	Central Mail Room Requirements $5 - (2600-500) \times 0.0018 = 3.02$	3
	222.7	Duplicating Impressions (Millions) $3 - (50-0.25) \times 4.0 = 2$	2
	NA	Word Processing Local Appraisal Standard of 5000 lines weekly per person estimated workload will reach 20,000 weekly $20,000 \div 5 = 4$	4
	NA	Messenger Service Local Appraisal Two spaces considered minimum essential to provide messenger service for in-house and to other activities	2
	NA	Civilian Personnel Liaison Local Appraisal One space considered essential to provide liaison to local CPO; determine training requirements and POC for personnel actions	1
		Total	<u>19</u>
04	613.1	Engineering Plans and Programs Division Office of Chief Directed Staffing (2)	2
	613.2	Plans Branch Annual cost of in-house program in millions $33 + (625-600) \times 0.40 = 34$	34
	613.4	Programs Branch Authorized Installation Strength Under 10,000 = 2 each inst X 3	6

Table E1. (Cont'd).

<u>Paragraph</u>	<u>Yard- Stick</u>	<u>Activity</u>	<u>Indicated Spaces</u>
		Cameron 544 - 2	
		McNair 934 - 2	
		Myer 3714 - $\frac{2}{6}$	
	613.3	Quality Assurance Annual Cost of Completed Projects (Millions) $7 - (4-3.87) \times 1.0 = 7.13$	7
		Total	<u>49</u>
05		Housing Division	2
	581.1	Chief Housing Manager Directed Staffing (2)	
	582	Family Housing Local Appraisal (14)	14
	580	Furnishing Local Appraisal (9)	9
	NA	JAFRO Local Appraisal (14)	14
		Total	<u>39</u>
06		Operations and Maintenance Division	2
	612.1	Office of Chief By concepts, a military engineer officer will be the chief of the O&M Division. the O&M Division is a new concept of the USAEA,CA organization and is not addressed by the staffing guide therefore, the yard- stick for Engineer Resource Management Division (551-612.1) was used to staff the Office of the Chief, O&M Division, due mainly to its great emphasis on the work coordination function. The actual work authorization count exceeded 24,000 docu- ments and therefore justifies at least two spaces in the Office of the Chief.	
06A	563.1	Building Grounds (B&G) Branch USAEA,CA B&G Branch is combination of Staffing Guide and B&G Division Branches; i.e., Building and Structures Branch, and Land Management Branch (less Roads and RR Branch). In addition Staffing Guide Table 551-563.1 (DIO, Transport	12

Table El. (Cont'd).

<u>Paragraph</u>	<u>Yard- Stick</u>	<u>Activity</u>	<u>Indicated Spaces</u>
		Branch) was used as basis for Maintenance and Service (M&S) Equipment Maintenance Function. In addition, six pest controllers were transferred from Cameron Station to USAEA,CA HQ staff.	
06B	651	Utilities Branch USAEA,CA Utilities Branch is a combination of Staffing Guide Utilities Division Branches; i.e., Mechanical, Electrical, and Sanitation Branches. Staffing is based on providing an appropriate capability for each of the above-mentioned disciplines, plus a Supervisor Branch Chief. This branch also has staff responsibility for fire prevention and protection and is staffed accordingly.	6
06C	612.3 612.4 612.5	Work Coordination Branch The Work Coordination Branch is organized into three formal sections--Work Reception and Scheduling Section, Estimating and Planning Section, Technical Assistance Section--paralleling the existing MDW Work Coordination Branch functions. The Staffing Guide yardstick used in staffing the above sections is as follows: a. 551-612.3: Work Reception and Scheduling b. 551-612.4: Estimating and Facility Inspection c. 551-612.5: Industrial Engineering Service and Technical Assistance <u>Work Reception and Scheduling Section:</u> Work Order Clerks were calculated according to Staffing Guide formula as only one space; however, local appraisal prescribes four spaces, which coincides with current MDW TDA authorizations. The Staffing Guide yardstick for this section identifies five spaces (including the above-mentioned Work Order Clerk), but again local appraisal identifies one additional maintenance schedule and two additional warehousemen, so that each stock issue point is manned at one each. The Facility Manager position identified in the Staff Guide is substituted with a Supervisory Maintenance Scheduler. This section then agrees with current authorization in the MDW TDA.	31

Table E1. (Cont'd).

<u>Paragraph</u>	<u>Yard- Stick</u>	<u>Activity</u>	<u>Indicated Spaces</u>
		<p><u>Estimating and Planning Section:</u> The Staffing Guide yardstick calls for seven spaces for the planner/estimator function, plus an additional three spaces for the component inspection function. This coincides exactly with local appraisal and current TDA authorizations.</p> <p><u>Technical Assistance Section:</u> Section name changed due to conflict with branches in Resource Management Division. Staffing Guide yardstick (551-612.5) identifies a total of nine spaces to be assigned to the Industrial Engineer function throughout the headquarters. This includes three data transcribers to be assigned to the work coordination function. Local appraisal identifies 10 spaces in this function, including a Data Control Clerk; eight of these spaces were assigned to the Technical Assistance Section. Two of the data transcription spaces are currently not addressed in the current MDW TDA; the third space has been assigned to an existing and authorized Computer/Mach operator and is filled by an E-5. The remaining two spaces will be used in the Industrial Engineering function required in the Resource Management Division.</p>	
		Total	<u>51</u>
07		Resource Management Division	
	612.1	Office of Chief	2
		Annual Work Documented (1000)	
		$2 + (25,000-20,000) \times 0.067 = 2.34$	
	612.2	Financial Management	6
		Strength 500 DAFE	
		500 Strength = 6	
	131	Management Analysis	2
		Population (1000)	
		Review and Analysis (2)	
		$3 - (2500-500) \times 1.0$	
		One Industrial Engineer	

Table E1. (Cont'd).

	<u>Paragraph</u>	<u>Yard- Stick</u>	<u>Activity</u>	<u>Indicated Spaces</u>
			Review and Analysis	2
			Local Appraisal	
			Two Program Analysts are considered minimum essential staffing for other function (2)	
	441		Force Development: Manpower Management Population (Thousands) $4 - (5000-500) \times 0.2 = 3.10$	3
	612.6		Installation (Supervisor 1) 1 Real Property 1 Sq Ft (Million) $1 - (3.0-1.9) \times 0.25 = 0.72$	3
			Space Management (1) Local Appraisal	
	62		Automated Systems Directed Manpower Requirements (6)	6
			Total	<u>24</u>
08	621		Supply Division Office of Chief Strength 11=1	1
	622		Property Control Line Items Monthly $5 - (8000-7640) \times 0.10 = 4.64$	5
	623		Storage Line Items Monthly $6 - (8000-7640) \times 0.63 = 5.76$	6
			Stock Issue Points (3) Local Appraisal	6
			<u>McNair</u> <u>Myer</u> <u>Cameron</u>	
			Stock Records Clerk 1 1 1	
			Warehouseman 1 2 2	
			2 2 2	
			Total	18

APPENDIX F:

DETAILED PROCESS--INSTALLATION MASTER PLANNING

This appendix summarizes activities for installation master planning to be accomplished in each organization. Several conventions have been adopted to simplify the narrative explanation of each chart. The District referred to throughout is the Baltimore District Office. Organizations not otherwise designated are part of the USAEA,CA. While fully given in the flowcharts, names of the various organizational elements may be abbreviated in the supporting narrative.

The USAEA,CA role in master planning is outlined in Figures F1 and F2. Each process is discussed in outline form with reference to the figures.

Installation Master Planning for MDW Installations (Figure F1).

1. The MDW Staff Engineer develops the requirements and justification for preparing the Installation Master Plan (IMP).

2.,3.,4. The Installation Commander initiates the Installation Planning Board (IPB) activity; requests the Financial Branch to budget funds for the IMP effort, and establishes the IPB, including a MOU on how the activity will operate, points of contact, forms, procedures, and lines of communication.

5. Local city, county, and state planning boards should participate in the IPB and development of the MOU establishing the IPB.

6.,7. The installation Commander initiates the IPB Activity, ratifies that the Real Property Maintenance Manager (RPMM) will serve as an advisory member and notifies the Director USAEA,CA of the forthcoming IPB activity.

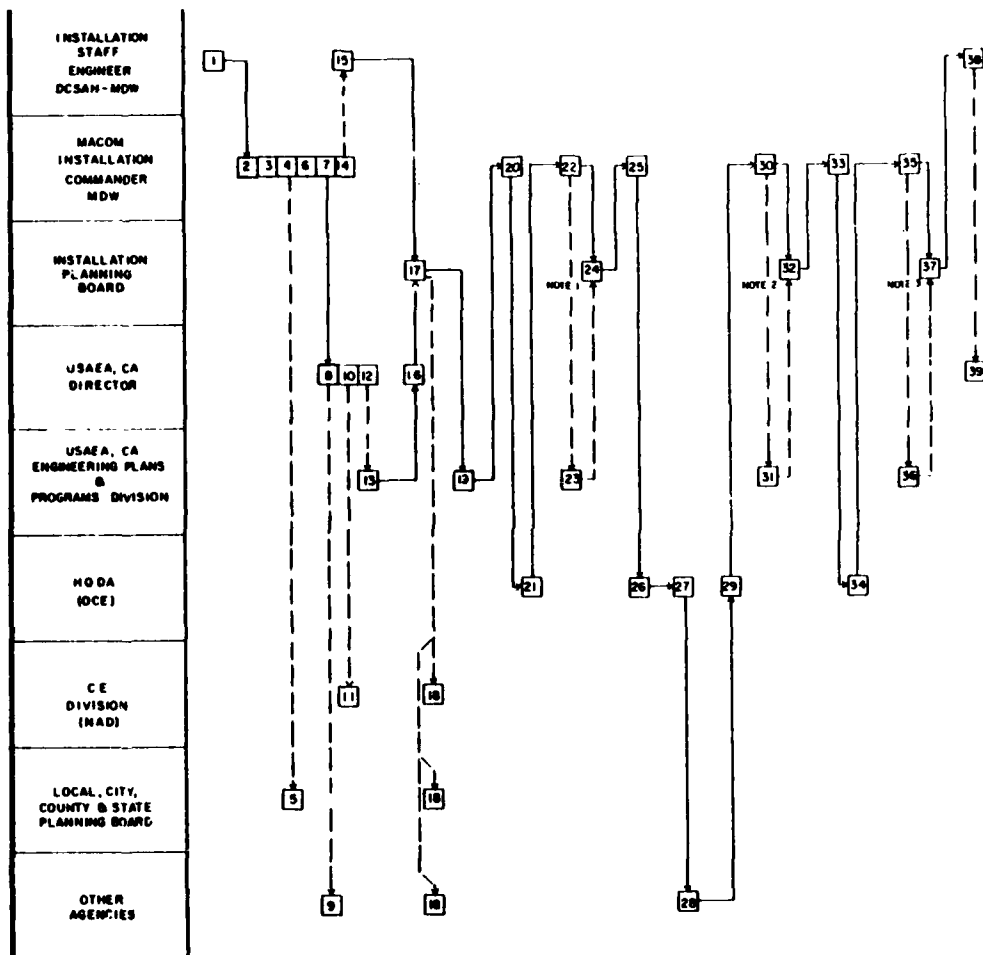
8.,9.,10.,11.,12. The Director formulates plans for presentation to the IPB; notifies other MACOM commanders and Federal agencies of the pending IPB activity, requests the NAD Division Engineer to serve on the IPB; provides consulting services when required; and provides in-house support.

13. The Engineering Plans and Programs Division (EPPD) prepares the maintenance, repair, and construction program for presentation to the IPB, including documentation and priority recommendations on proposed new projects.

14.,15. The Installation Commander and the Staff Engineer convene the IPB.

16. The Director reviews the USAEA,CA developed program and forwards it to the IPB for action and prioritizing.

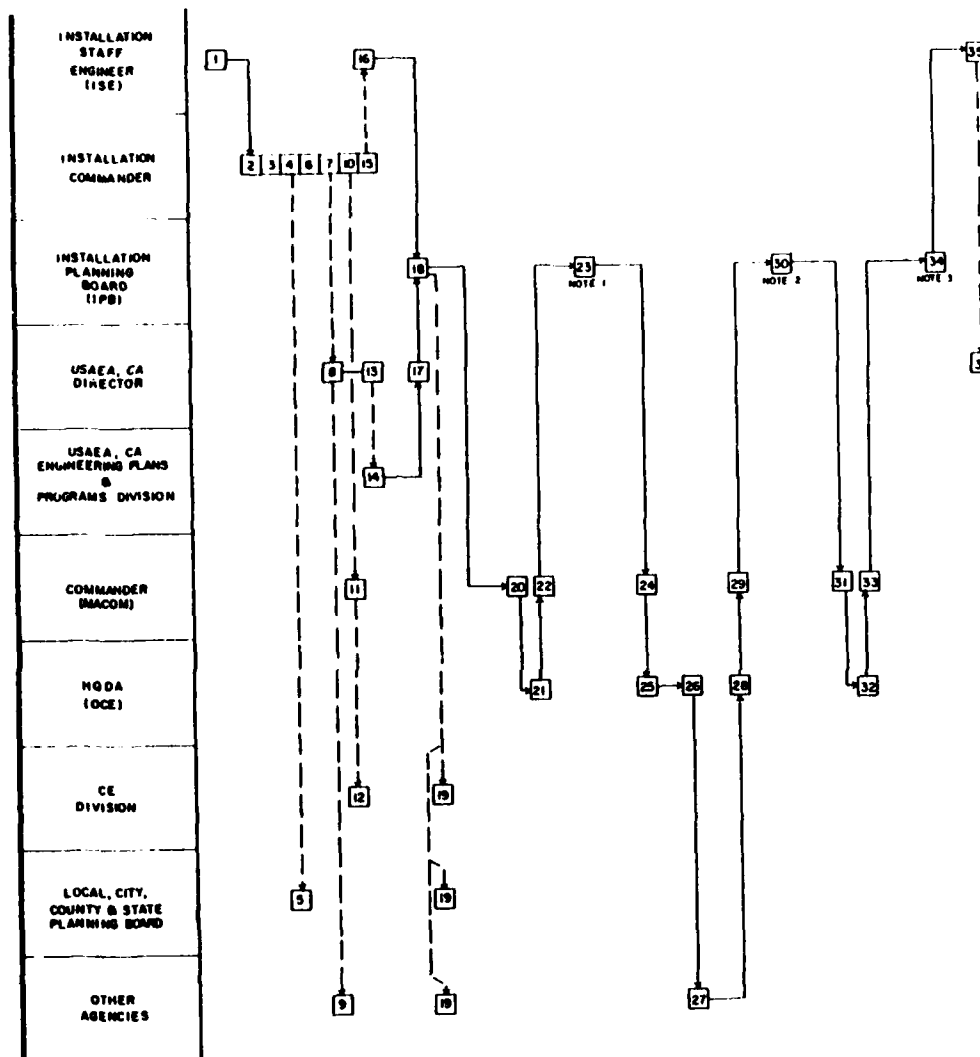
17.,18. The IPB formulates Phase I of the Master Plan with the participation of representatives from NAD, Area Planning Boards, and other Federal agencies.



NOTES

- 1 IF PHASE I REQUIRES REWORK AND RESUBMITTAL, REPEAT STEPS 11 THRU 23
- 2 IF PHASE II REQUIRES REWORK AND RESUBMITTAL, REPEAT STEPS 24 THRU 30
- 3 IF PHASE III REQUIRES REWORK AND RESUBMITTAL, REPEAT STEPS 31 THRU 39
- 4 APPROVED MASTER PLAN SHALL BE UPDATED BY THE INSTALLATION MASTER PLANNING BOARD ANNUALLY AS REQUIRED, AND SUBMITTED AS DEFINED IN AR 210-20, PARA 1-8

Figure F1. Installations master planning for MDW installations.



NOTES

- 1 IF PHASE I REQUIRES REWORK AND RESUBMITTAL, REPEAT STEPS 16 THRU 22
- 2 IF PHASE II REQUIRES REWORK AND RESUBMITTAL, REPEAT STEPS 23 THRU 29
- 3 IF PHASE III REQUIRES REWORK AND RESUBMITTAL, REPEAT STEPS 30 THRU 33
- 4 APPROVED MASTER PLAN SHALL BE UPDATED BY THE INSTALLATION MASTER PLANNING BOARD ANNUALLY AS REQUIRED, AND SUBMITTED AS DEFINED IN AR 210-50, PARA 1-8

REFERENCES AR 210-5
AR 210-20
USAEA, CA FUNCTIONAL STATEMENTS

Figure F2. Installations master planning for non-MDW installations.

19. The EPPD revises the IMP Phase I to reflect IPB guidance and transmit it to the Installation Commander.

20. The Installation Commander transmits the IMP, Phase I, to the HQDA and other agencies as required by AR 210-20, Para 1-8(2), and as shown in Figure B-1 of the AR.

21. HQDA performs and coordinates the technical review and analysis of the IMP, resolves comments from other agencies, and approves the IMP.

22. The Installation Commander furnishes copies of the IMP to the USAEA,CA (for information revision, if required by HQDA) and gives a copy to the IPB for action.

23. The EPPD revises the IMP, if needed, and provides assistance to the IPB.

24. The IPB revises the Phase I IMP and resubmits it, if necessary, and develops the IMP, Phase II.

25. The Installation Commander submits the IMP, Phase II, to the HQDA for approval.

26. HQDA (OCE) reviews the IMP, Phase II, and submits it to the DASD (I and H) for approval.

27. With DASD (I and H) approved, HQDA (OCE) provides copies to the other Federal Agencies, NCPC, Commission on Fine Arts, and the National Advisory Council on Historic Preservation for review.

28. The other agencies review, prepare comments, and submit the comments to HQDA.

29. HQDA (OCE) performs and coordinates a technical review and analysis, resolves review comments, and approves the IMP, Phase II.

30. The Installation Commander sends the IMP to the IPB for action, and sends an information copy to the Programs Branch.

31. The Programs Branch revises the IMP if needed and provides assistance to the IPB.

32. The IPB reuses the Phase II IMP, resubmits it if necessary, and develops the IMP, Phase III.

33. The Installation Commander transmits the IMP to HQDA (OCE) and to other agencies as appropriate.

34. HQDA performs and coordinates the technical review and analysis of the IMP, resolves review comments, and approves the IMP, Phase III.

35. The Installation Commander sends the IMP to the IPB for action, and sends an information copy to the Programs Branch.

36. The Programs Branch revises the IMP, if needed, and provides assistance to the IPB.

37. The IPB finalizes the IMP and forwards the plans to the Staff Engineer for implementation.

38. The Staff Engineer coordinates the master plan and construction program with the installation staff and the USAEA,CA.

39. The Director coordinates implementation of the IMP with the Staff Engineer in the following areas.

a. Administrative and Planning Staff

- (1) Implement MACOM Annual and Long-Range Work Plan.
- (2) Coordinate budgeting and financial matters for RPMA.
- (3) Develop long-range and current plans consistent with the IMP.
- (4) Develop a 5-year MCA plan consistent with the IMP.
- (5) Determine facility requirements in support of organizational or staff activities.

b. Real Property Maintenance Managers

- (1) Implement the Master Plan based on the requirements, justifications, and supporting documentation from the Staff Engineer.
- (2) Coordinate the maintenance, repair, and construction programs based on the Master Plan.

Installation Master Planning for Non-MDW Installations (Figure F2).

1. The MDW Staff Engineer develops the requirements and justification for preparing the Installation Master Plan (IMP).

2.,3.,4. The Installation Commander initiates the Installation Planning Board (IPB) activity; requests the Financial Branch to budget funds for the Corps effort, and establishes the IPB, including an MOU on how the activity will operate, points of contact, forms, procedures, and lines of communication.

5. Local, city, county, and state Planning Boards should participate in the IPB and in the development of the MDW establishing the IPB.

6.,7. The Installation Commander initiates the IPB activity and notifies the Real Property Maintenance Manager (RPMM) of his/her advisory position and the Director USAEA,CA of the forthcoming IPB activity.

8. The Director USAEA,CA formulates plans for presentation to the IPB, and notifies other MACOM commanders and Federal agencies of the pending IPB activity.

9. The other agencies participate and cooperate to resolve problems of mutual interest.

10. The Installation Commander notifies the MACOM of forthcoming IPB activities.

11. The MACOM Commander requests the Division Engineer to serve the IPB and provide consulting services when required, and provides in-house support.

12. The Division Engineer notifies the appropriate Division personnel and advises the District to take an active part, either as an Associate member of the IPB or a voting member representing the Division Engineer.

13. The Director, USAEA,CA, notifies the appropriate sections of pending IPB.

14. The Engineering Plans and Programs Division (EPPD) prepares the maintenance, repair, and construction program for presentation to the IPB, including documentation and priority recommendations on proposed new projects.

15. The Installation Commander initiates the IPB activity.

16. The Staff Engineer convenes the IPB.

17. The Director reviews the USAEA,CA-developed program and forwards it to the IPB for action and prioritizing.

18.,19. The IPB formulates Phase I of the Master Plan with the participation of representatives from NAD, Area Planning Boards, and other Federal agencies.

20. The MACOM Commander transmits the Phase I IMP to the HQDA and other agencies as required by AR 210-20, Para 1-8(2), and as shown in Figure B-1 of the AR.

21. HQDA performs and coordinates the technical review and analysis of the IMP, resolves comments from other agencies, and approves the IMP.

22. The MACOM Commander furnishes copies of the IMP to the USAEA,CA for information/revision, if required by HQDA, and gives a copy to the IPB for action.

23. The IPB revises the Phase I IMP and resubmits it if necessary, and develops the IMP, Phase II.

24. The MACOM Commander submits the Phase II IMP to the HQDA for approval.

25. HQDA (OCE) reviews the Phase II IMP and submits it to the DASD (I and H) for approval.

26. With DASD (I and H) approval, HQDA (OCE) provides copies to the other Federal agencies, NCPC, Commission on Fine Arts, and the National Advisory Council on Historic Preservation for review.

27. Other reviewers prepare comments and submit them to HQDA.

28. HQDA (OCE) performs and coordinates a technical review and analysis, resolves review comments, and approves the Phase II IMP.

29. The MACOM Commander sends the IMP to the IPB for action.

30. The IPB revises the Phase II IMP, and resubmits it if necessary, and develops the IMP, Phase III.

31. The MACOM commander transmits the IMP to HQDA (OCE) and to other agencies as appropriate.

32. HQDA performs and coordinates the technical review and analysis of the IMP, resolves review comments, and approves the IMP, Phase III.

33. The MACOM Commander sends the IMP to the IPB for action.

34. The IPB finalizes the IMP and forwards the plans to the Staff Engineer for implementation.

35. The Staff Engineer coordinates the master plan and construction program with the installation staff and the USAEA,CA.

36. The Director, USAEA,CA, coordinates implementation of the IMP with the Staff Engineer in the following areas:

a. Administrative and Planning Staff

- (1) Implement MACOM Annual and Long-Range Work Plan.
- (2) Coordinate budgeting and financial matters for RPMA.
- (3) Develop long-range and current plans consistent with the IMP.
- (4) Develop a 5-year MCA plan consistent with the IMP.
- (5) Determine facility requirements in support of organizational or staff activities.

b. Real Property Maintenance Managers

- (1) Implement the Master Plan based on the requirements, justifications, and supporting documentation from the Staff Engineer.
- (2) Coordinate the maintenance, repair, and construction programs based on the Master Plan.

APPENDIX G:

DETAILED PROCESS--SUPPLY

This appendix summarizes the supply activities to be done in each organization. Several conventions have been adopted to simplify the narrative explanation of each chart. The District referred to throughout is the Baltimore District Office. Organizations not otherwise designated are part of the USAEA,CA. While fully given on the flowcharts, names of the various organizational elements may be abbreviated in the supporting narrative.

Stock Replenishment of Authorized Stock List (ASL) (Figure G1)

1. The Requisition Section establishes the ASL based on demand (i.e., essentially in accordance with AR 420-17).
2. The FESS accepts the ASL and generates the Replenishment and Reorder Report.
3. The Requisition Section reviews the Replenishment and Reorder Report and decides whether to honor, delete, or defer requisitioning each item. Action is taken on DD Form 3953 (Purchase Request and Commitment).
4. The DD Form 1348 is forwarded to the ICP for action (Step 4A of Figure G1) or to obtain the appropriate local procurement authorization signature; the DA Form 3953 is forwarded to the USAEA,CA Procurement Annex if less than \$10,000 or to the Baltimore District Procurement Division if more than \$10,000.
5. The Requisition Section establishes a due-in transaction in FESS and produces a financial document for the Financial Inventory Accounting (FIA) Section.
6. The Financial Management Branch (FMB) records the financial commitment.
7. The Federal Supply Source (FSS) ships the items to the Receipt Section of the Storage Branch if they were purchased on DD Form 1348.
8. The local vendor ships the items to the Receipt Section of the Storage Branch, if they were purchased on DA Form 3953.
9. The Receipt Section performs the acceptance inspection, authenticates the receipt on DD Form 1348-1, DD Form 250, or DD Form 1155, and prepares a report on any discrepancies. A copy of the authenticated receipt is forwarded to the Receipt Section of the Property Control Branch and to the FMB.
10. The Receipt Section forwards the accepted item to the Storage Section.
11. The items are stored in their designated storage locations.

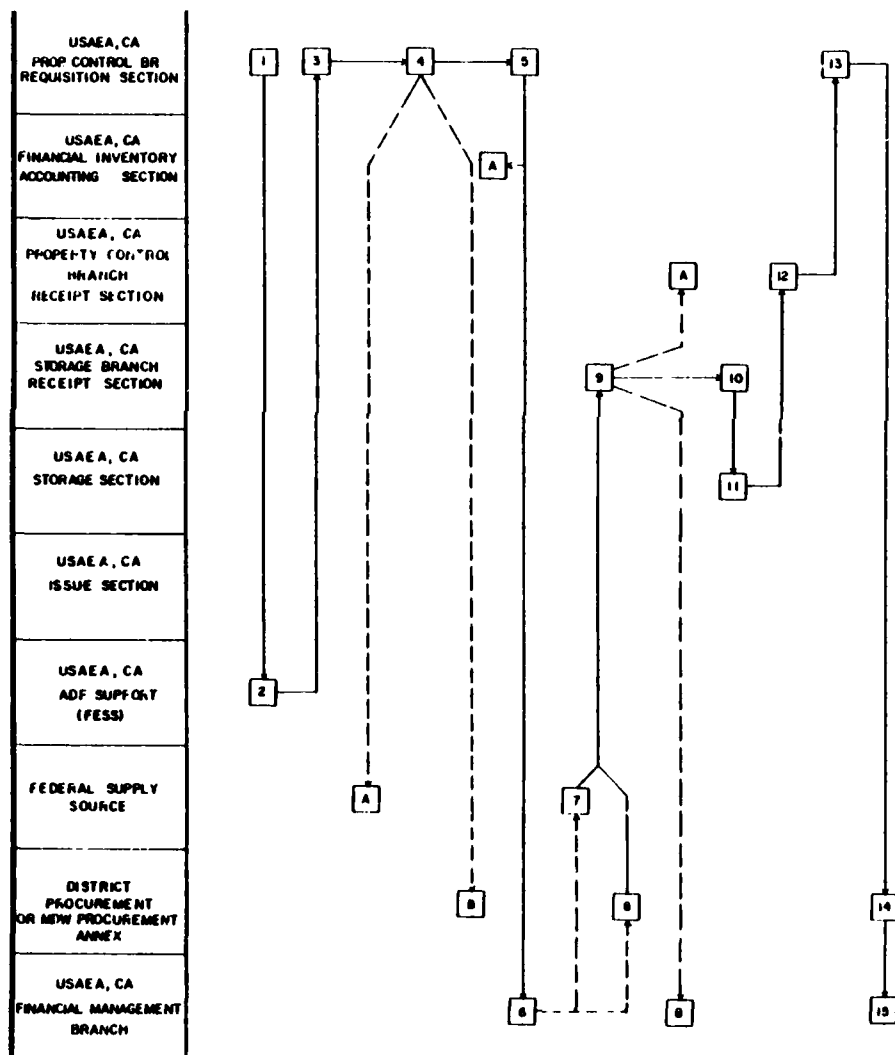


Figure G1. Stock replenishment of ASL (authorized storage list)
(ASL-based upon demands or essentiality), AR 402-17.

12. The Receipt Section of the Property Control Branch uses the information copy of the authenticated receipt to clear its suspense file, and forwards a receipt copy to the Requisition Section of the Property Control Branch.

13. The Requisition Branch records the quantity received, clears the due-in transaction in FESS, produces and forwards the financial transaction document to the FIA Section, and notifies the USAEA, CA Procurement Annex or the Baltimore District that the requisition has been satisfied.

14. The Procurement Office closes out the appropriate file.

15. Based on the financial transaction document, the Financial Management Branch initiates payment to the FSS, if applicable.

Non-Stock Items Obtained From Federal Supply Source (Figure G2)

1. The using activity prepares the DA Form 2765-1 (Request for Issue or Turn-In) and forwards it to the Requisition Section, Property Control Branch.

2. The Requisition Section reviews the request and forwards it to the FMB.

3. The FMB certifies the availability of funds and returns the request to the Requisition Section.

4. The Requisition Section prepares a DD Form 1348m (MILSTRIP REQUISITION) in accordance with AR 725-50.

5. The Requisition Section establishes due-in/due-out dates and inputs to FESS. Furnishes a commitment/obligation to the FMB (Step 5A, Figure G2) where it is recorded.

6. The Requisition Section forwards the requisition to the appropriate FSS.

7. The FSS fills out the requisition and ships it to the designated destination. Bills may be submitted to the FMB or added to the suspense billing.

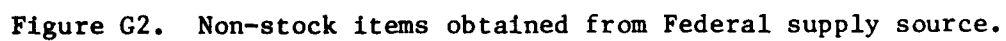
8. The Receipt Section of the Property Control Branch accepts the items.

9. The Receipt Section notifies the Material Coordinator (O&M Division) that the item has been received and moves the item into the Holding Area.

10. The Receipt Section clears the Due-In/Due-Out file in FESS.

11. The Receipt Section forwards the authenticated receipt to the FIA Section and to the FMB.

12. The FMB initiates payment to the FSS.



Non-Stock Local Purchase Under \$10,000 Through Purchasing Annex (Figure G3)

1. The using activity submits a request on DA Form 2765-1 (Request for Issue or Turn-In) and forwards it to the Requisition Section, Property Control Branch.
2. The Requisition Section reviews the request and prepares DA Form 3953 (Purchase Request and Commitment) in sufficient copies for distribution to suspense, data entry to FESS, and to the Procurement Annex. The DA Form 3953 is forwarded to the FMB for certification that funds are available.
3. The FMB certifies the availability of funds and returns the form to the Requisition Section.
4. The Acquisition Section establishes the Due-In/Due-Out dates in FESS and forwards copies of the DA Form 3953 to the Purchasing Agent.
5. Purchasing places an order with a local vendor, and forwards a copy of the DD Form 1155 (Order for Supplies/Request for Quotations) to the Receipt Section and FMB.
6. The vendor delivers the items to the designated location and submits an invoice to the FMB.
7. The FMB retains the invoice to authenticate the receipt.
8. The Receipt Section receives material from the vendor, inspects and accepts the shipment, and forwards the authenticated delivery ticket to the FMB.
9. The Receipt Section clears the Due-In/Due-Out in FESS and notifies the Acquisition Section.
10. The Receipt Section takes the following actions:
 - a. Files a copy of the receipt with the voucher file.
 - b. Forwards a copy of the receipt to the Purchasing Annex.
 - c. Forwards a copy of the receipt to the FMB.
12. The Purchasing Annex closes the procurement file.
13. The FMB initiates payment to the vendor.

Purchases Over \$10,000 Through Support District Purchasing (Figure G4)

1. The using activity submits the purchase request.
2. The Requisition Section authenticates the requisition or purchase orders on DD Form 2544 and establishes appropriate records in FESS.
3. The FMB certifies the availability of funds.

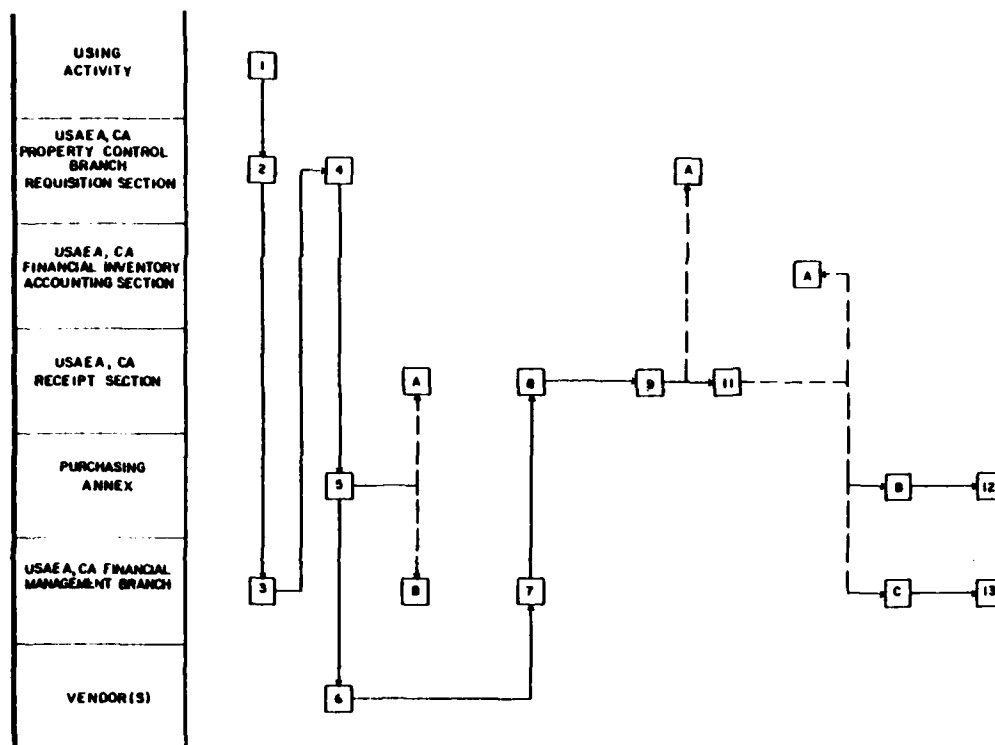


Figure G3. Non-stock local purchase under \$10,000 through purchasing annex.

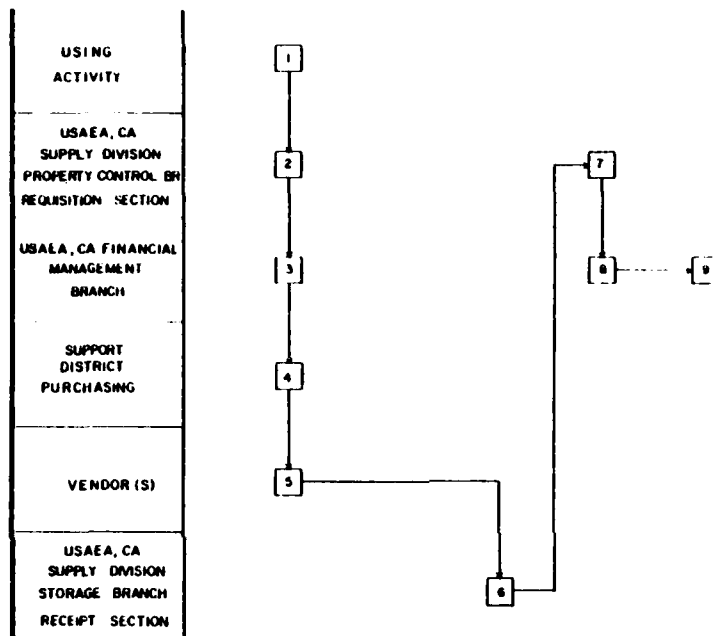


Figure G4. Purchases over \$10,000 through support district purchasing.

4. The Support District Purchasing makes the purchase in accordance with the request.

5. The vendor provides the supplies.

6. The Receipt Section receives the supplies and forwards the Notice of Receipt to the Requisition Section.

7. The Requisition Section records the quantity received, clears the Due-In File, produces the financial transaction for FMB, and produces a notice to the Procurement Annex or District Procurement Office to close the purchase order or commercial receipt.

8. The FMB clears the receipt suspense file.

9. The FMB initiates payment to the vendor.

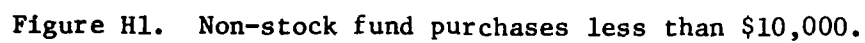
APPENDIX H:

DETAILED PROCESS--PROCUREMENT MANAGEMENT

This appendix summarizes activities for procurement management to be done in each organization. Several conventions have been adopted to simplify the narrative explanation of each chart. The District referred to throughout is the Baltimore District Office. Organizations not otherwise designated are part of the USAEA,CA. While fully given on the flowcharts, names of the various organizational elements may be abbreviated in the supporting narrative.

Non-Stock Fund Purchases Less than \$10,000 (Figure H1).

1. Procurement prepares DA Form 3953 (Purchase Request and Commitment) and DA Form 4286 (Facilities Engineering Contract Data) to purchase non-stock fund items, establishes a suspense file, and prepares input to IFS. A copy is sent to the Plans Branch, EPPD, if an engineering design or technical evaluation is needed before processing the request.
2. The Financial Management Branch (FMB) certifies the availability of funds and establishes another suspense file.
3. MDW DCSACQ processes the request, and prepares solicitation or other more appropriate actions.
4. Copies of the solicitation are distributed to vendors/contractors who prepare bids (Step 4A of Figure H1).
5. MDW DCSACQ receives bids, performs all reviews/evaluations, and awards purchase orders to the successful vendor/contractor.
6. The vendor/contractor performs the required services or delivers the specified materials.
7. Procurement receives a copy of the contract award and a notice that the services have been accomplished or materials have been delivered. Procurement closes the suspense file and prepares DD Form 250 (Material Inspection and Receiving Report) or signs a copy of both DD Form 1155 and DA Form 4286 to certify receipt of the services/materials.
8. FMB receives the authentication copy of the request and forwards it to the District F&A Branch.
9. The Baltimore District F&A branch initiates payment to the vendor/contractor and distributes copies of the paid vouchers to the FMB and the MDW DCSACQ to close out files.
10. The vendor/contractor receives the payment to complete the contract transaction.



Small Purchases Less Than \$10,000 (Services) Including GSA-FSS Purchases Greater Than \$10,000 (Figure H2).

1. The using activity initiates the request for services.
2. The O&M Division prepares an estimate, a Statement of Work describing the needed services, and a DA Form 3953 (Purchase Request and Commitment). Documentation is returned to the requestor for review and confirmation (Step 2A in Figure H2).
3. The FMB certifies the availability of funds.
4. The MDW Procurement Branch processes the request and submits it to the appropriate contractors for quotations.
5. Contractors prepare their quotations and submit them to the MDW Procurement Branch.
6. The MDW Procurement Branch evaluates the quotations and awards the contract on DD Form 1155 (Order for Supplies or Services/Request for Quotations) and distributes the Purchase Order (Steps 6A, 6B, and 6C in Figure H2). The FMB makes the needed distribution within the USAEA,CA.
7. The contractor performs the required services.
8. The using activity receives the needed services.
9. The Real Property Maintenance Manager (RPMM) inspects the work and provides on-site coordination with the contractor.
10. The contractor submits an invoice for payment to the District F&A Branch and provides a copy to the RPMM.
11. The RPMM authenticates the services received on DD Form 1155 or on the invoice and forwards it to the FMB with a copy furnished to the MDW Procurement Branch.
12. The FMB reviews the authenticated DD Form 1155/invoice and forwards it to the District F&A Branch.
13. The District F&A Branch reviews the authenticated forms, makes payment and distributes copies to (1) the MDW Procurement Branch to close its file, and (2) to the FMB for the USAEA,CA copies.
14. The contractor receives the payment to complete all contract activities.

Construction Projects Less Than \$10,000 (Figure H3)

1. The using service initiates the request on DA Form 4283 (Facilities Engineering Work Request) and submits it to the O&M Division.

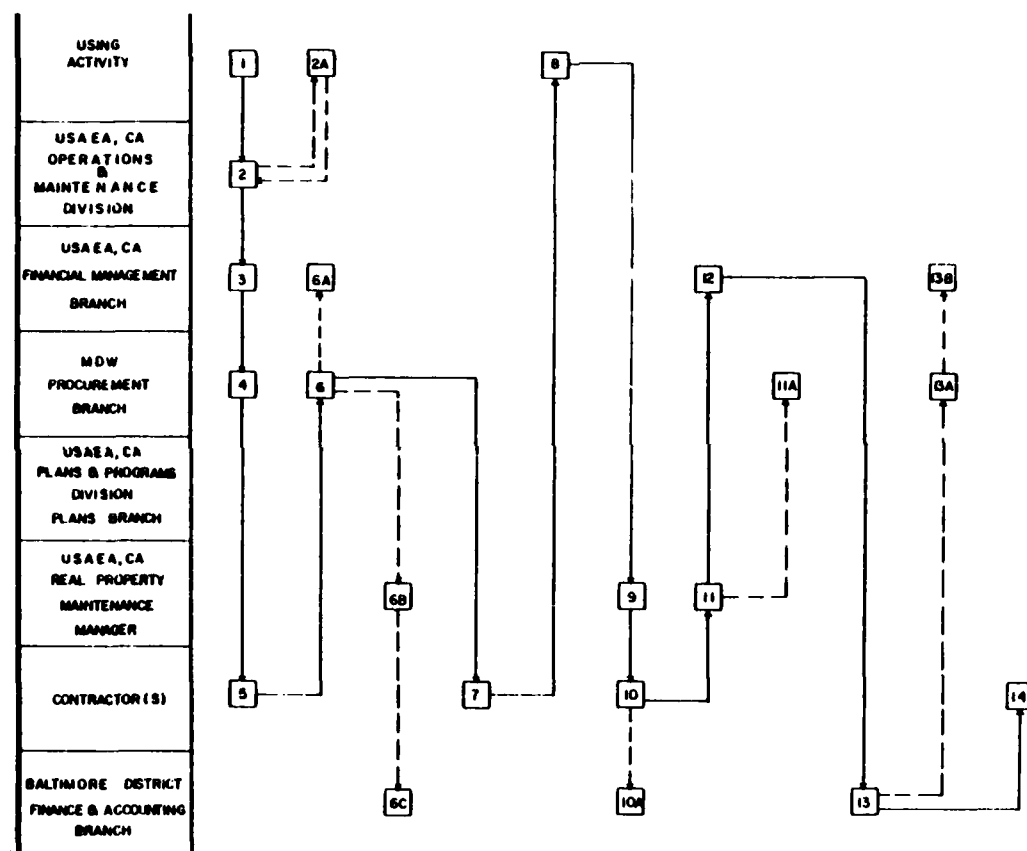


Figure H2. Small purchases less than \$10,000 (services) (includes GSA-FSS purchases greater than \$10,000).

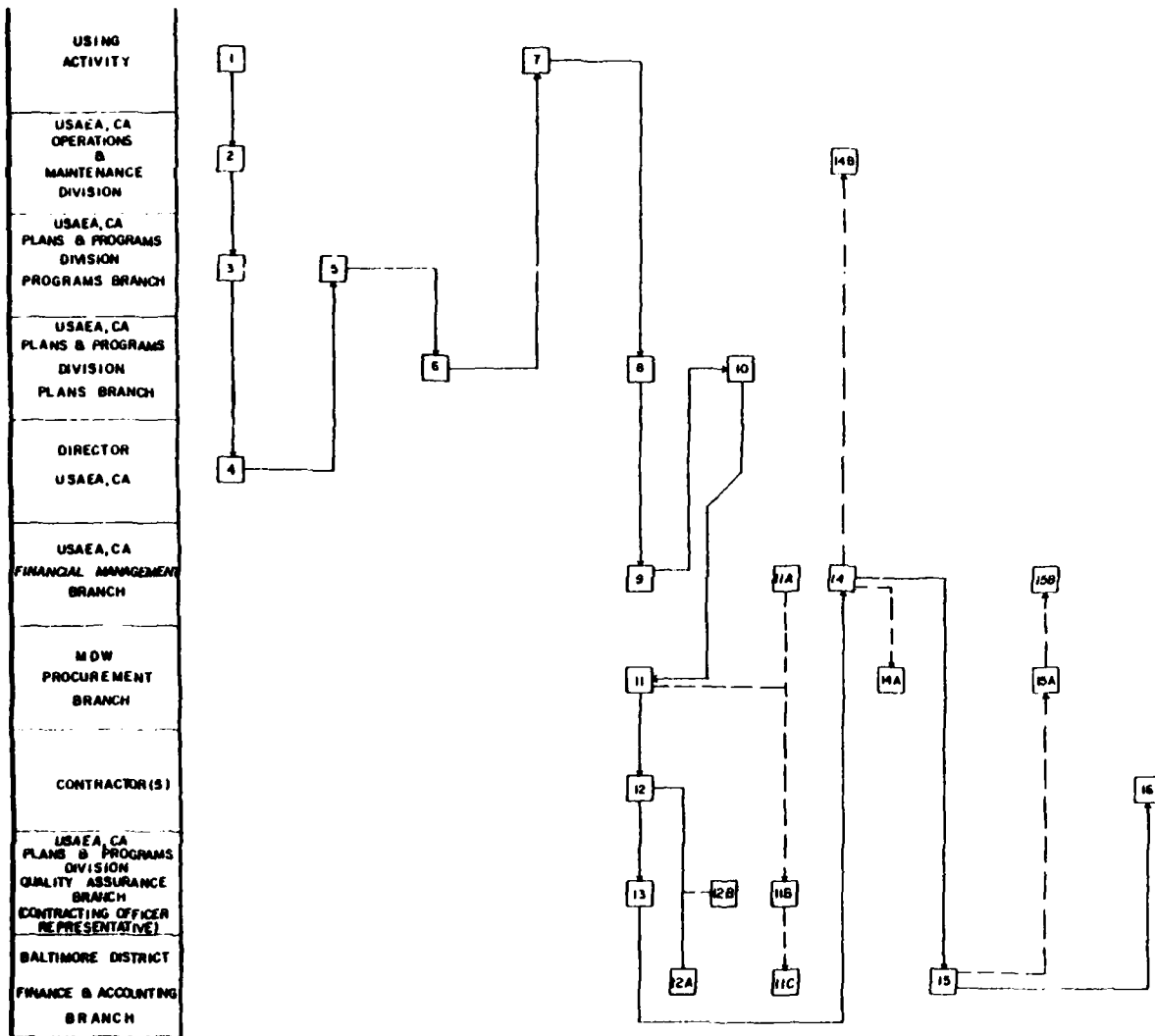


Figure H3. Construction projects less than \$10,000.

2. If contracting out the work appears to be the best alternative to accomplish the work, the O&M Division processes the report and forwards it to the Programs Branch.

3. The Programs Branch reviews the request and recommends a course of action to the Director.

4. The Director approves the request and returns it to the Programs Branch.

5. The Programs Branch initiates a DA Form 4285 (Engineer Design Format) and forwards it with the DA Form 4283 to the Plans Branch.

6. The Plans Branch accomplishes any needed design, prepares a cost estimate and DA Form 2544 (Intra-Army Order for Reimbursable Services), and completes the DA Form 4285. The DA Form 2544 is given to the user for approval.

7. The user approves the DA Form 2544 authorizing work to begin and returns it to the Plans Branch.

8. The Plans Branch prepares DA Form 3953 (Purchase Request and Commitment) and DA Form 4286 (Facilities Engineering Contract Data), and forwards the DA Form 3953 to the FMB.

9. The FMB certifies the availability of funds on the DA Form 3953 and returns it to the Plans Branch.

10. The Plans Branch forwards all documents to the MDW Procurement Office.

11. MDW Procurement solicits quotations from appropriate contractors, evaluates the quotations, obtains all reviews/approvals, and awards the purchase order on DD Form 1155 (Order for Supplies or Services/Request for Quotations). Copies of the contract are sent to the FMB, Contracting Office Representative (COR) in the Quality Assurance Branch, and the District F&A Branch.

12. The contractor performs the required work and submits an invoice to the District F&A Branch with a copy to the COR.

13. The Quality Assurance Branch inspects and accepts the work, prepares a receiving report on the invoice or notes acceptance on the DD Form 1155, and forwards it to the FMB.

14. The FMB forwards a copy for payment to the District along with a copy to the MDW Procurement Office, and sends the DA Form 4286 to the O&M Division when the project files are closed.

15. The District F&A Office pays the contractor and distributes copies of the final payment to the MDW Procurement Branch and to the FMB to close out files.

16. The contractor receives the payment.

Contractual Actions Less Than \$10,000, (Non-Stock Fund Supplies/Services)
(Figure H4)

1. The using agency initiates the request.
2. The O&M Division may initiate the request based on identified need. All requests are reviewed and the following documents prepared:

 Project Description
 Scope of Work
 DA Form 3953 (Purchase Request and Commitment)
3. The FMB reviews the request and certifies the availability of funds on DA Form 3953. Copies are provided to the Baltimore District Procurement Office and to the F&A Branch.
- 4., 5. Procurement prepares the solicitation and obtains a legal review if required.
6. Procurement issues the solicitation to appropriate contractors and makes internal distribution.
7. Contractors respond to the solicitation and submit offers to the District Procurement Office.
8. Procurement receives the offers, evaluates the offers and obtains all needed reviews and approvals, awards the contract, and distributes copies of the contract to the FMB, O&M Division, and the appropriate Real Property Maintenance Manager (RPMM).
9. The contractor provides the supplies/services required by the contract and submits an invoice to the Baltimore District F&A Branch, along with a copy to the receiving office.
10. The RPMM receives the supplies/services and prepares a DD Form 250 (Material Inspection and Receiving Report), noting acceptance of the contractor's performance, and sends it to the FMB.
11. The FMB forwards the DD Form 250 to the F&A Branch for payment.
12. The F&A Branch pays the contractor and distributes copies of the final payment to the District Procurement Office and to the O&M Division to close out files.
13. The contractor receives the payment to complete all contract activities.

Contractual Actions Greater Than \$10,000 (Services) (Figures H5)

1. The using agency initiates the work request for services.

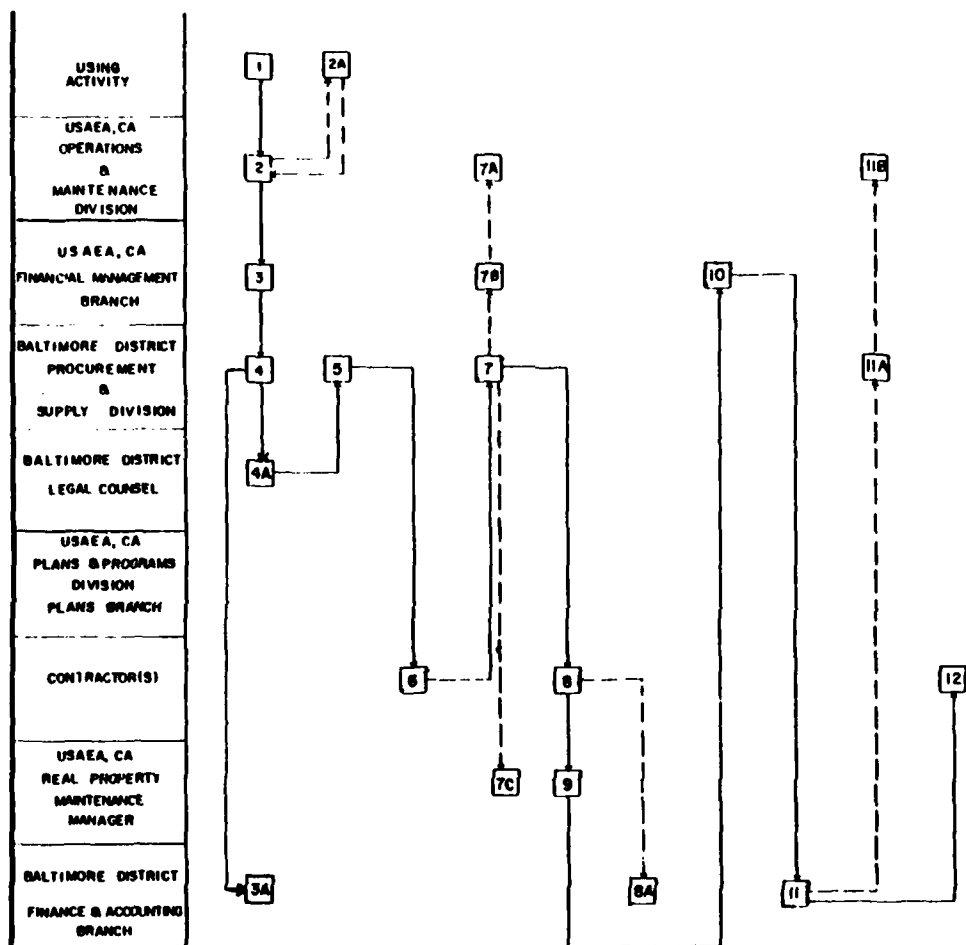


Figure H4. Contractual actions greater than \$10,000 (non-stock fund supplies/services).

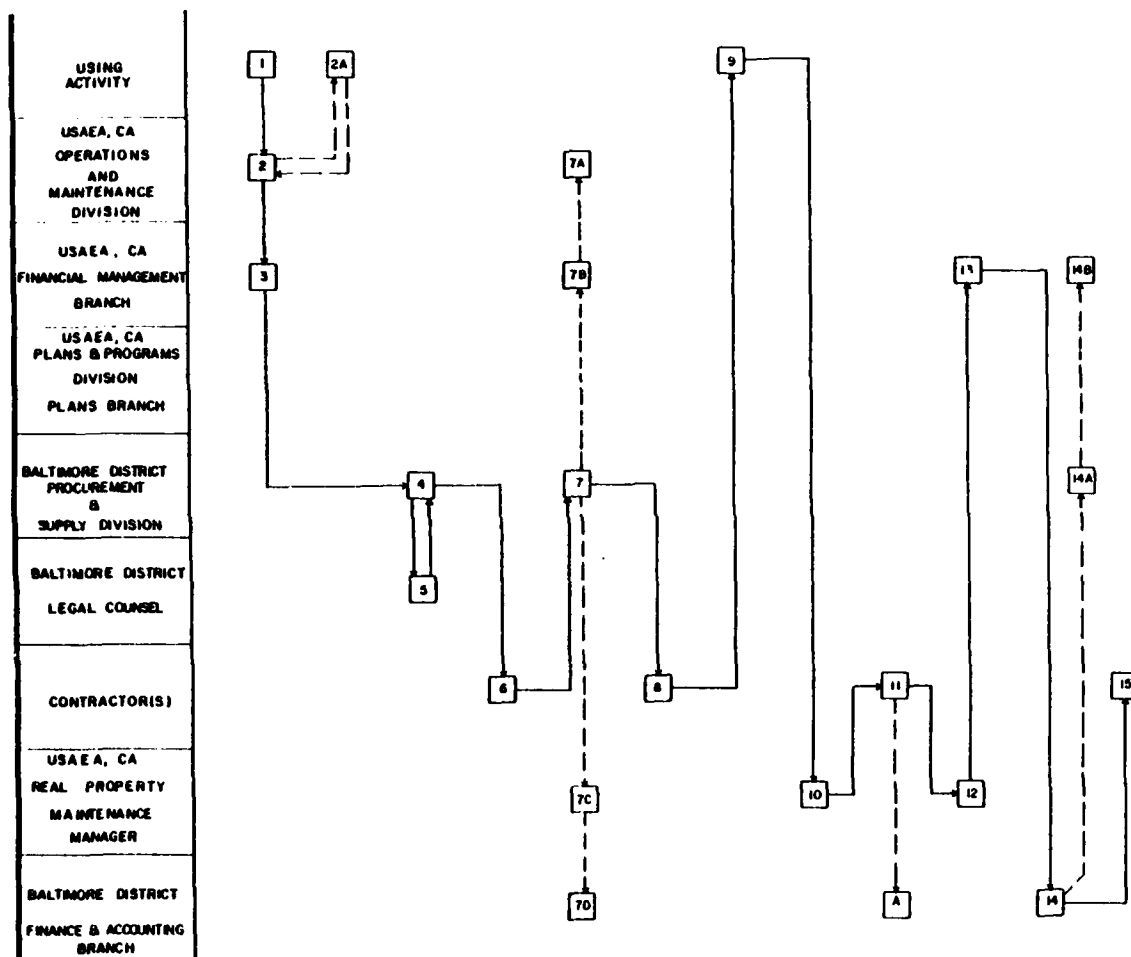


Figure H5. Contractual actions greater than \$10,000 (services).

2.,2A. The O&M Division prepares an estimate and a Statement of Work for a contract and prepares DA Form 3953 (Purchase Request and Commitment). The using agency reviews and approves the package.

3. The FMB certifies the availability of funds.

4.,5. The District Procurement Office prepares the solicitation, obtains legal review, and issues solicitation to appropriate contractors.

6. The contractors prepare their offers and submit them to the Baltimore Procurement Office.

7. The District Procurement Office evaluates the offers, obtains all needed reviews and approvals, awards the contract, and distributes copies to the O&M Division, FMB, the appropriate RPMM, and the District F&A Branch.

8.,9. The contractor performs the required services and submits an invoice for payment to the District F&A Branch with a copy furnished to the RPMM.

10.,11.,12. The RPMM inspects the services provided, coordinates with the contractor, authenticates receipt of services, and prepares a Receiving Report.

13. The FMB reviews and forwards the Receiving Report, to the District F&A Branch for payment.

14. The F&A Branch makes the payment and provides copies of the payment to the District procurement office and to the FMB for closing out the files.

15. The contractor receives the payment.

Contractual Actions Greater Than \$10,000 But Less Than \$100,000 (Construction), OMA Funded (Figure H6)

1. The using activity initiates the request on a DA Form 4283 (Facilities Engineering Work Request).

2. The O&M Division reviews the request and recommends that the work be done by contract.

3. The Programs Branch reviews the request and recommends approval to the Director USAEA,CA.

4. The Director approves the DA Form 4283.

5. The Program Branch initiates a DA Form 4285 (Engineer Design Format) and sends it with the DA Form 4283 to the Plans Branch.

6. The Plans Branch prepares the design and cost estimate, and prepares a DA Form 2544 (Inter-Army Order for Reimbursable Services) for the using agency.

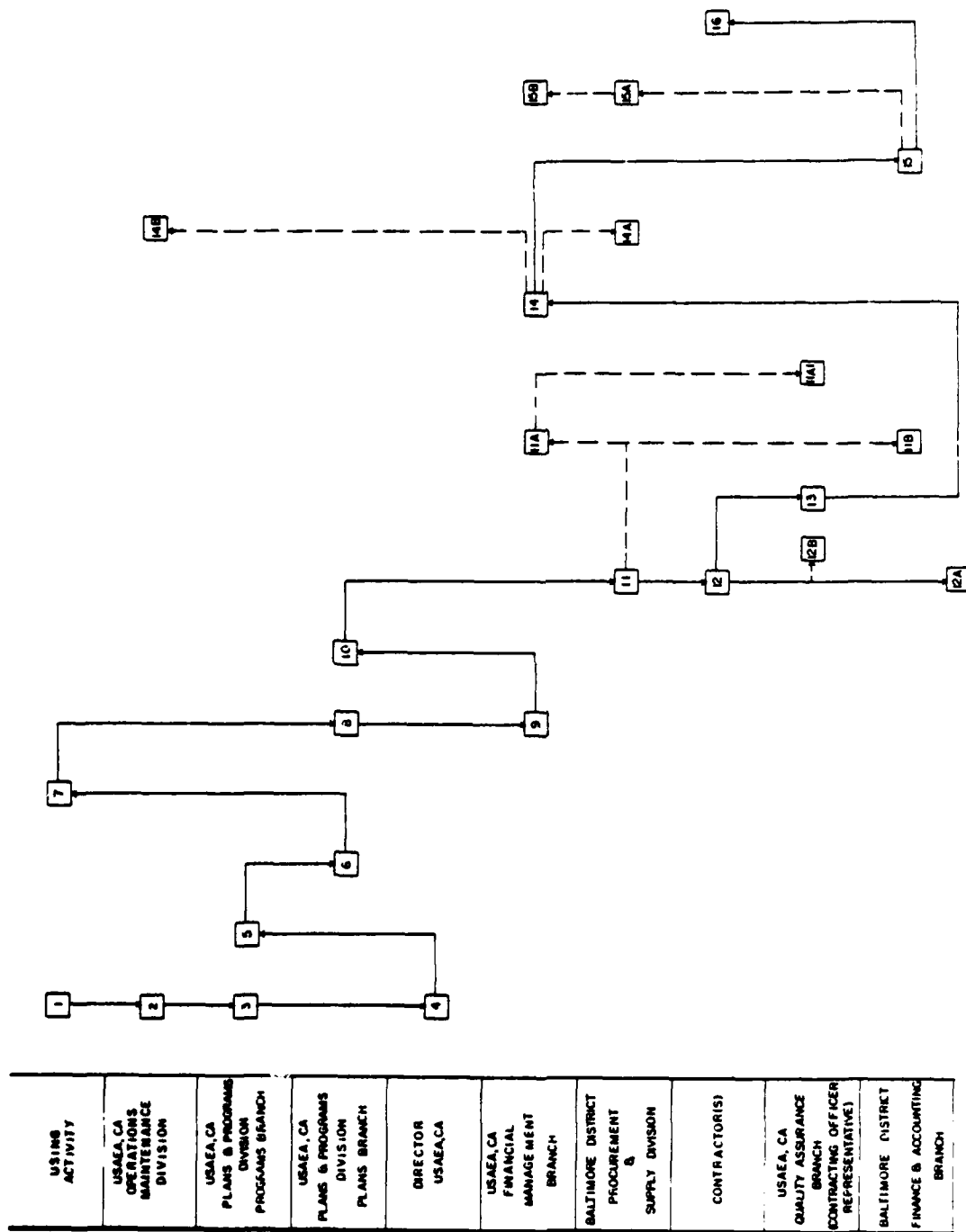


Figure H7. Contractual actions greater than \$10,000 but less than \$100,000 maintenance and repair.

7. The using agency approves the DA Form 2544 and returns it to the Plans Branch.

8. The Plans Branch prepares a DA Form 3953 (Purchase Request and Commitment) and a DA Form 4286 (Facilities Engineering Contract Data) and forwards them to the FMB.

9. The FMB certifies the availability of funds and returns the forms to the Plans Branch.

10. The Plans Branch forwards the documents to the District Procurement Office.

11. The Procurement Office obtains all needed reviews, selects bids/proposals, receives bids/proposals, obtains all needed reviews, awards the contract, issues a Notice to Proceed to the contractor, and distributes copies of the contract to the FMB for USAEA,CA distribution, to the COR, and to the District F&A Branch.

12. The contractor receives the Notice to Proceed, performs the work, and submits an invoice to the District F&A Branch with a copy to the COR.

13. The Quality Assurance Branch inspects the work, and upon completion, certifies the invoice as a Receiving Report accepting the work. The Branch also prepares a DA Form 4286 and forwards it to the FMB.

14. The FMB forwards the invoice to the District F&A Branch and the DA Form 4286 to the O&M Division.

15. The District F&A Branch pays the contractor and distributes copies of the payment to the District Procurement Office and to the FMB to close out files.

16. The contractor receives the payment.

Contractual Actions Greater Than \$100,000 But Less Than \$500,000 Maintenance and Repair (Figure H7)

1. The using activity initiates the request on a DA Form 4283 (Facilities Engineering Work Request).

2. The O&M Division reviews the request and recommends that the work be done by contract.

3. The Programs Branch reviews and recommends approval to the Director, USAEA,CA.

4. The Director approves the DA Form 4283.

5. The Programs Branch initiates a DA Form 4285 (Engineer Design Format) and sends it with the DA Form 4283 to the Plans Branch.

6. The Plans Branch prepares the design and cost estimate and prepares a DA Form 2544 (Inter-Army Order for Reimbursable Services) for the using agency.

7. The using agency approves the DA Form 2544 and returns it to the Plans Branch.

8. The Plans Branch prepares a DA Form 3953 (Purchase Request and Commitment) and a DA Form 4286 (Facilities Engineering Contract Data) and forwards them to the FMB.

9. The FMB certifies the availability of funds and returns the forms to the Plans Branch.

10. The Plans Branch forwards the documents to the District Procurement Office.

11. The Procurement Office obtains all needed reviews, selects bids/proposals, receives bids/proposals, obtains all needed reviews, awards the contract, issues a Notice to Proceed to the Contractor, and distributes copies of the contract to the FMB for USAEA,CA distribution, to the COR, and to the District F&A Branch.

12. The contractor receives the Notice to Proceed, performs the work, and submits an invoice to the District F&A Branch, along with a copy to the COR.

13. The Quality Assurance Branch inspects the work, and upon completion, certifies the invoice as a Receiving Report accepting the work. The Branch also prepares a DA Form 4286 and forwards it to the FMB.

14. The FMB forwards the invoice to the District F&A Branch and the DA Form 4286 to the O&M Division.

15. The District F&A Branch pays the contractor and distributes copies to the District procurement office and to the FMB to close out the files.

16. The contractor receives the payment.

Contractual Actions Greater Than \$100,000 But Less Than \$500,000 MCA Minor Construction With In-House Design (Figure H8)

1. The using activity initiates the work with a DA Form 4283 (Facilities Engineering Work Request).

2. The Work Request is processed through to the Director, USAEA,CA. The request and justification documents are submitted to OCE.

3. OCE reviews the package, matches the fund allocation with a prioritized need, evaluates the impact on the existing program, and prepares the needed impact and defending statements.

4. DA reviews, approves, and allocates funds.

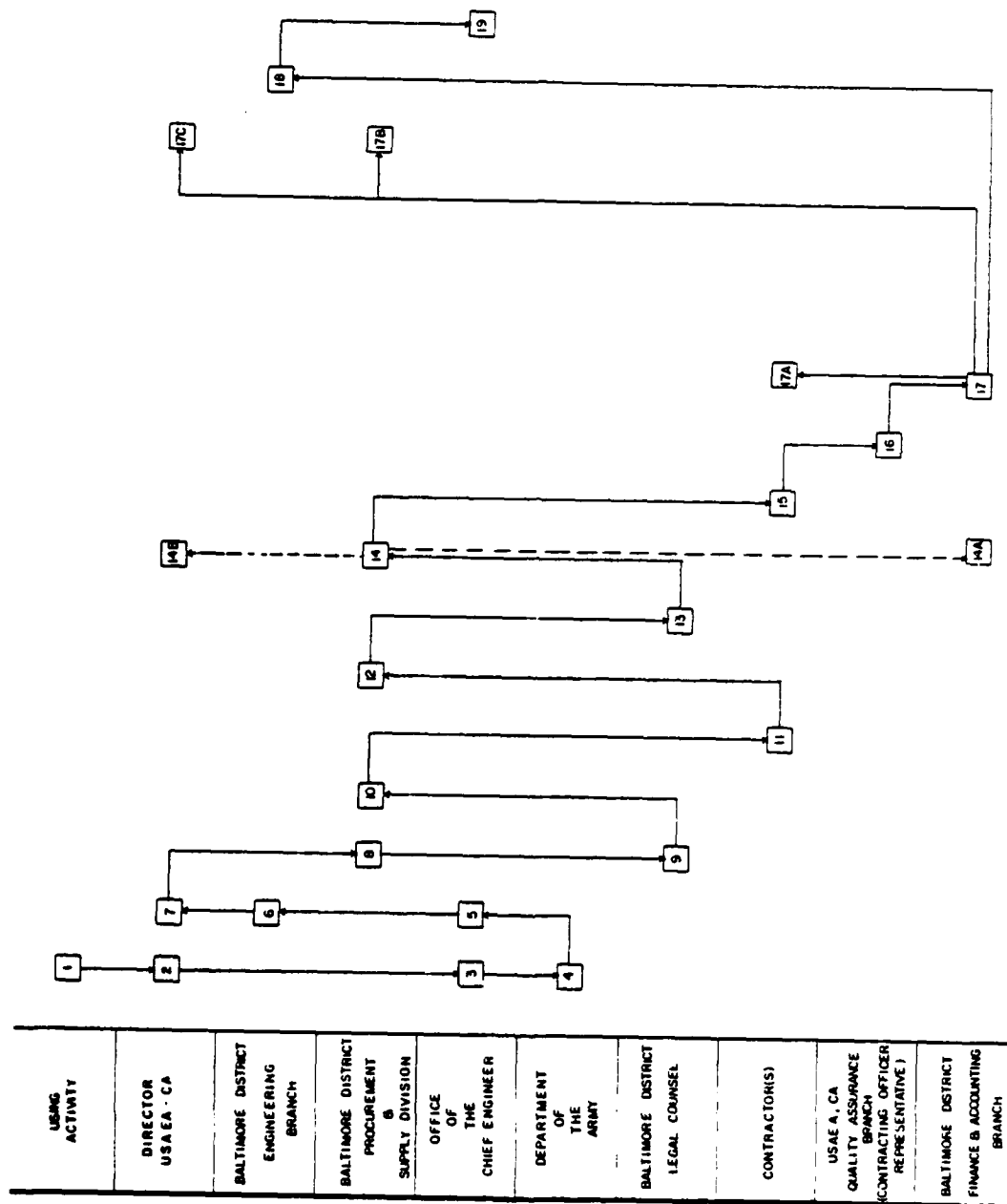


Figure H8. Contractual actions greater than \$100,000 but less than \$500,000 MCA (minor in-house design).

5. OCE receives the approval and funding and forwards them to the District for action.

6. The District forwards the funding/authorization to the USAEA,CA.

7. The USAEA,CA Plans Branch does the design, cost estimate, and DA Form 3953 (Purchase Request and Commitment). The FMB certifies availability of funding on the DA Form 3953.

8.-14. The District Procurement Officer prepares the solicitation, obtains all needed reviews, solicits bids, receives bids, obtains needed reviews, awards the contract, issues a Notice to Proceed to the contractor, and distributes copies of the contract to the Director, USAEA,CA, and to the District F&A Branch.

15. The contractor receives the Notice to Proceed, performs the work, and submits an invoice to the District F&A Branch, along with a copy to the COR.

16. The Quality Assurance Branch supervises and inspects the work, performs the acceptance inspection, authenticates receipt of work, and prepares a Receiving Report. This Report is furnished to the FMB for transmittal to the District for payment.

17. The District F&A Branch makes the payment and provides copies of the payment to the District Procurement Office and to the Director, USAEA,CA. The contractor receives the payment.

18. The District prepares a notification of completion for OCE.

19. OCE receives the notification and closes files.

Contractual Actions Greater Than \$100,000 But Less Than \$500,000 MCA (Minor Construction--District Design) (Figure H9)

1. The using activity initiates the project.

2. The Director, USAEA,CA, accepts the project and prepares the justification documents for DA approval.

3. OCE reviews, matches the funding allocation with the prioritized need, evaluates the impact on the program, and prepares the impact and defending statements.

4. DA/DOD approves the project documents and allocates funds.

5. OCE transmits the approval and the funding allocation to the District.

6.-12. The District Engineering Division prepares the documentation needed for an AE contract. The Procurement Office awards the AE contract. The AE completes the design under the supervision of the Engineering Division. The design is accepted and the contractor paid. The Procurement Officer obtains all needed reviews and approvals, issues the solicitation,

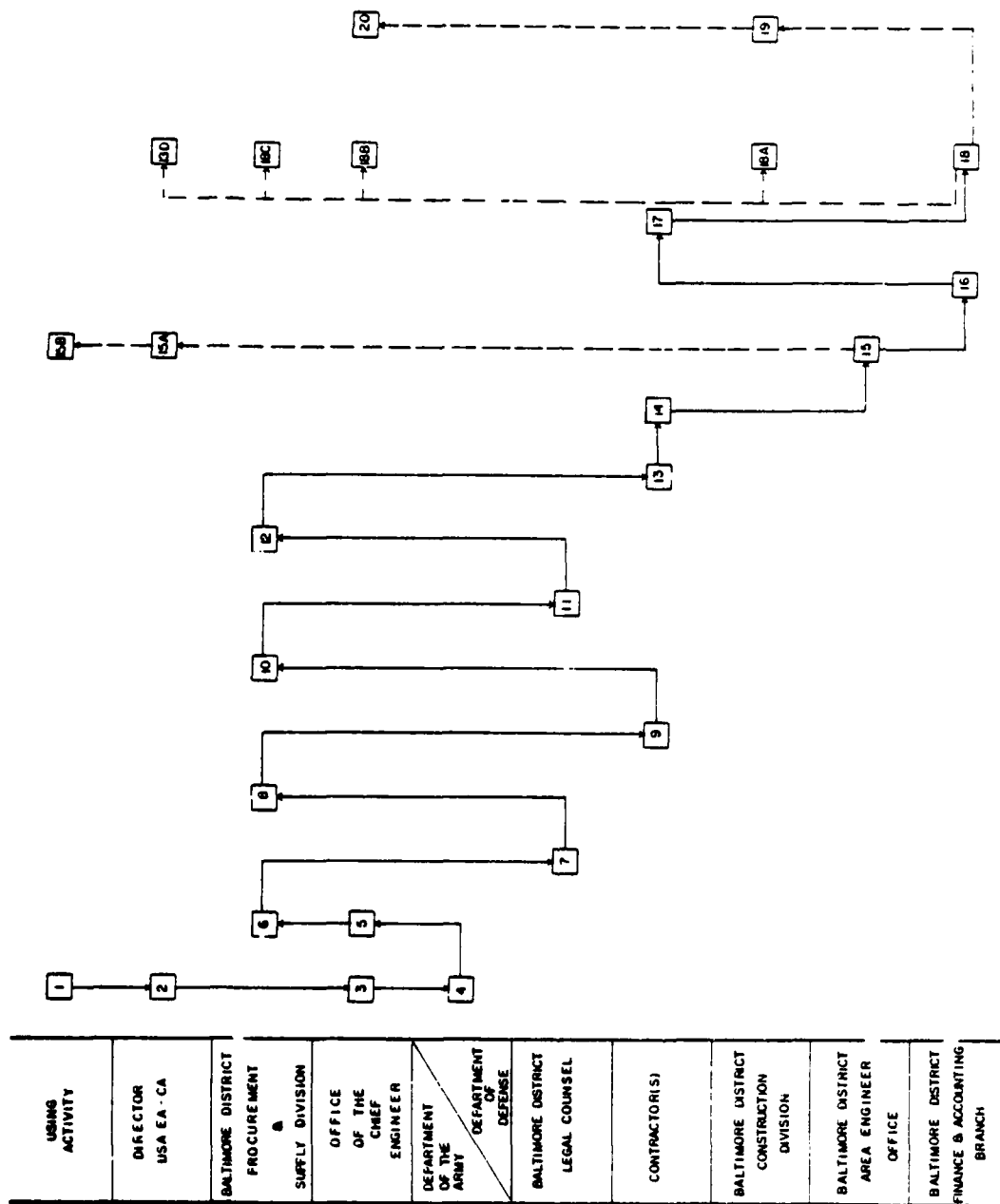


Figure H9. Contractual actions greater than \$100,000 but less than \$500,000 MCA (minor - district design).

receives bids, evaluates bids, awards the contract, and furnishes the contractor a Notice to Proceed. Copies of the contract are distributed.

13.,14. The contractor receives the Notice to Proceed and performs the required work.

15. The Area Office inspects the work in progress, performs the acceptance inspection using DD Form 1354 (Transfer and Acceptance of Military Real Property) and prepares a payment estimate. Copies of the DD Form 1354 are furnished to the using activity and to the Director, USAEA,CA.

16. The District F&A Branch makes the final payment.

17. The contractor receives the payment and signs the release, which completes the contract activities.

18. The District F&A Branch receives the contractor's release. Copies of the final payment are distributed to the District Construction Division, the Procurement Office, OCE, and the Director USAEA,CA.

19. The District Construction Division prepares a Notice of Completion.

20. OCE receives the Notice of Completion and closes the file.

Contractual Actions Greater Than \$500,000, Major MCA Projects (Figure H10)

1. The using activity establishes the project requirement.

2. The USAEA,CA prepares the project justification and cost estimate, reviews the request against the Master Plan, and forwards it for approval.

3. OCE reviews the project documentation, verifies the cost estimate, determines prioritized need, and evaluates impact on the program; prepares impact and defending statements; and prepares the information package for Congress.

4. DA reviews the project documentation, verifies funding requirements in relation to overall need, and prepares the Congressional format from furnished information.

5. DOD reviews the documentation and presents the project to Congress as part of the MCA annual budget hearings.

6. Congress approves the budget and provides appropriate funding.

7. DOD allocates funding to DA.

8. DA allocates funding to OCE.

9. OCE issues the decision directives and funding documents.

10.-15. The District accomplishes the design through an AE contract supervised by the Engineering Division. The bid package is prepared and sent

to the prospective bidders. Legal reviews are made where required, and bids are received and evaluated. The contract is awarded to the successful bidder, and a Notice to Proceed issued to the contractor.

16.,17. The contractor receives the Notice to Proceed and does the required construction.

18. The Construction Division, through the Area Office, performs daily inspections and the acceptance inspection. Upon acceptance, the Area Office authenticates receipt of the facility and prepares appropriate forms for payment. The Director, USAEA,CA, accepts the finished construction. The using activity takes beneficial occupancy of the facility and certifies acceptance.

19. The District F&A Branch makes progress payments during the project and the final payment upon receipt of the acceptance forms. Copies of the final payment are furnished to the District Procurement Office, the Construction Division, OCE, DA, and DOD.

20. The contractor receives the final payment.

Delivery Orders Against Requirements Contracts (Figure H11)

1. The using agency initiates the order with a DA Form 4283 (Facilities Engineering Work Request).

2. The O&M Division processes the DA Form 4283 and recommends that the work be done by contract.

3. The Programs Branch processes the form and obtains the Director's approval.

4. The Director approves the DA Form 4283 and returns it to the Programs Branch.

5. The Programs Branch prepares a DA Form 4285 (Engineer Design Format) package for the Plans Branch, PPD.

6. The Plans Branch prepares the design and estimate, completes the DA Form 4285, and prepares and transmits a DA Form 2544 (Intra-Army Order for Reimbursable Services) to the using activity.

7. The using activity approves and returns the DA Form 2544.

8. The Plans Branch prepares a DA Form 3953 (Purchase Request and Commitment) and a DA Form 4286 (Facilities Engineering Contract Data) and forwards them to the FMB.

9. The FMB certifies the availability of funds.

10. The Plans Branch forwards the package to the MDW Procurement Branch.

11. The MDW Procurement Branch issues a delivery order to the contractor and furnishes a copy to the Quality Assurance Branch.

12. The contractor receives the order and delivers the supplies/materials.

13. The Quality Assurance Branch inspects and accepts the work, using a DD Form 1155 (Order for Supplies or Service/Request for Quotations) as the receiving report, prepares a DD Form 4286, and forwards the package to the FMB.

14. The FMB forwards the package to the District F&A Branch for payment, along with a copy to the MDW Procurement Branch, and sends the DA Form 4286 to the O&M Division to close out files.

15. The District F&A Branch makes the payment and distributes copies of the payment to the MDW Procurement Branch and the FMB.

16. The contractor receives the payment.

Change Orders Issued by Resident Contracting Officer on Construction Contracts (Figure H12)

1. The using activity requests a change to an existing contract.

2.,3. The Quality Assurance Branch evaluates the request and prepares a statement of work and an estimate. The Branch also requests an estimate from the contractor regarding the cost of incorporating the change.

4. The contractor prepares a cost estimate on the proposed change.

5. The Quality Assurance Branch reviews the estimate and forwards it to the Plans Branch for evaluation.

6. The Plans Branch evaluates the proposal and prepares a DA Form 2544 (Intra-Army Order for Reimbursable Services).

7. The Using Activity approves the DA Form 2544, accepting the estimated cost.

8. The Plans Branch prepares a purchase request on DA Form 3953 (Purchase Request and Commitment) and submits it to the FMB.

9. The FMB certifies the availability of funds.

10. The Quality Assurance Branch prepares a Change Order for signature.

11. The COR approves the Change Order.

12. The Quality Assurance Branch sends the Change Order to the contractor, directing that the change be made, and distributes copies of the Change Order to the District F&A Branch, the Procurement Office, and the FMB.

13. The contractor incorporates the Change Order in the contract and performs the work.

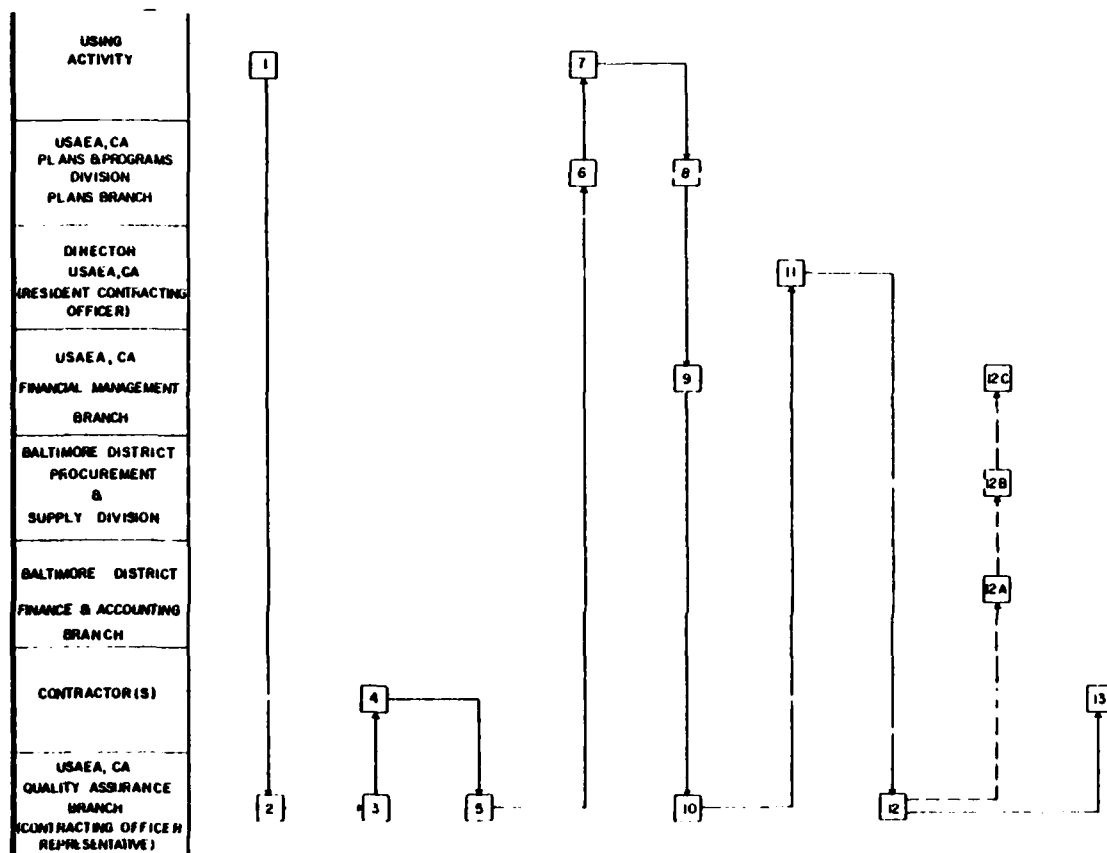


Figure H12. Change orders issued by resident contracting officer (construction).

Request for Modification of Service Contracts (Figure H13)

1. Requests for modification may originate with the using activity or the O&M Division.
2. The O&M Division reviews requests from the using agency, and prepares a modified scope of work, purchase request, and cost estimate.
3. The FMB certifies the availability of funds and forwards the certification to the District.
4. The District Procurement Office obtains the needed reviews and issues a modification to the contractor.
5. The contractor accepts the modification and begins the work.
6. The using activity receives the needed services.
7. The RPMM inspects and accepts the work, initiates a receiving report and forwards it to FMB, and prepares a DD Form 4286 (Facilities Engineering Contract Data) with actual cash values.
8. The FMB reviews the reports and forwards them to the District.
9. The District F&A Branch makes the payment and sends copies of the final payment to the District Procurement Officer and to the FMB.

Request for Modification of Contracts (Excludes Major MCA Contracts Greater Than \$500,000 and Minor MCA Contracts Greater Than \$100,000, But Less Than \$500,000) (Figure H14)

1. The using activity requests the modification or change to the contract.
2. The Quality Assurance Branch reviews and prepares a statement of work. The Plans Branch prepares the government estimates.
3. The Quality Assurance Branch requests a proposal from the contractor.
4. The contractor prepares a cost estimate to incorporate the change.
5. The Quality Assurance Branch receives the contractors's estimate and forwards it to the Plans Branch.
6. The Plans Branch reviews the contractor's estimate, compares it with the government estimate, and prepares a DA Form 2544 (Intra-Army Order for Reimbursable Services).
7. The using activity approves the DA Form 2544.

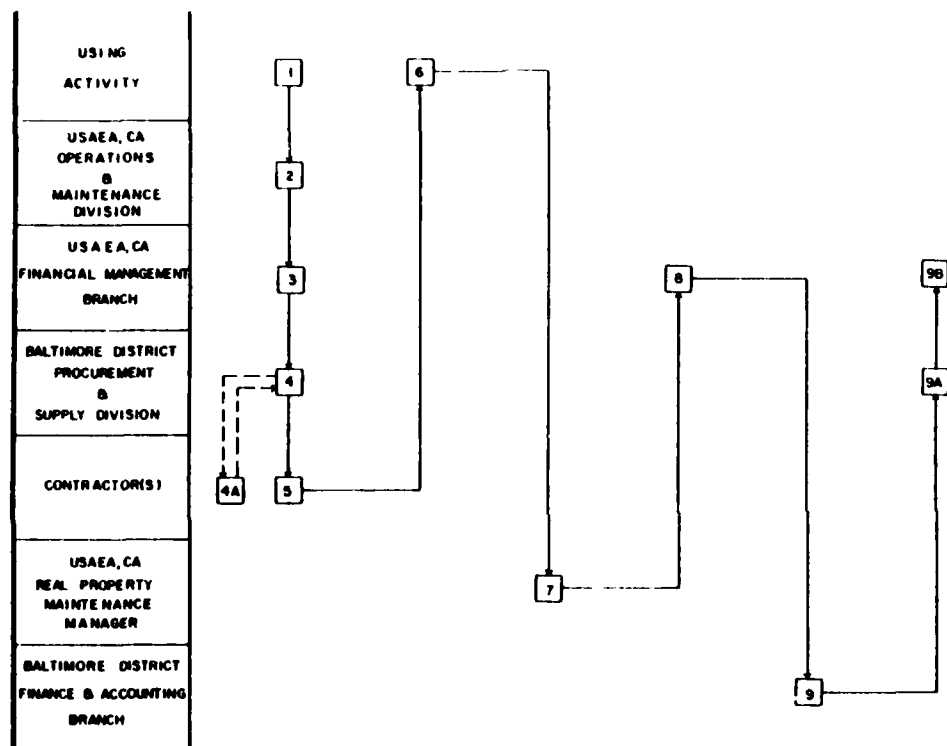


Figure H13. Request for modification of service contracts.

8. The Plans Branch prepares a DA Form 3953 (Purchase Request and Commitment) and forwards the package to the FMB.
9. The FMB certifies the availability of funds.
10. The Quality Assurance Branch forwards the package to the District.
11. The District Procurement Office prepares the modification, obtains needed reviews and approvals, and sends the modification to the contractor for signature.
12. The contractor signs the modification and returns it to the District.
13. The District Procurement Office has the modification signed by the Contracting Officer, sends a final copy of the modification to the contractor, and distributes copies to the FMB, Quality Assurance Branch, and the District F&A Branch.
14. The contractor proceeds with the work.

Imprest Funds--All Purchases Not Over \$150 and Less Than \$300 for Emergencies (Figure H15)

1. The using activity initiates the purchase request.
2. The MDW Procurement Branch verifies the request and places the order.
3. The USAEA,CA originator initiates an SF 1165 (Receipt for Cash--Subvoucher), establishes a suspense file, and initiates payment.
4. The vendor receives the order, provides the supplies, and is paid.
5. The Central Receiving Branch receives and distributes the supplies.
6. The F&A Branch verifies the completed SF 1165 and reimburses the fund.
7. The originator clears the suspense file.

Imprest Funds--Small Purchase (Not Over \$150 to \$300 in Emergencies) (Figure H15)

1. The using agency initiates the purchase request.
2. The MDW Procurement Branch receives, verifies, and places the appropriate order.
3. The USAEA,CA originator receives, initiates SF Form 1165 (Receipt for Cash--Subvoucher), establishes a suspense file, and initiates payment (Imprest Fund Cashier).
4. The vendor receives the order, fills it, and receives payment in cash.

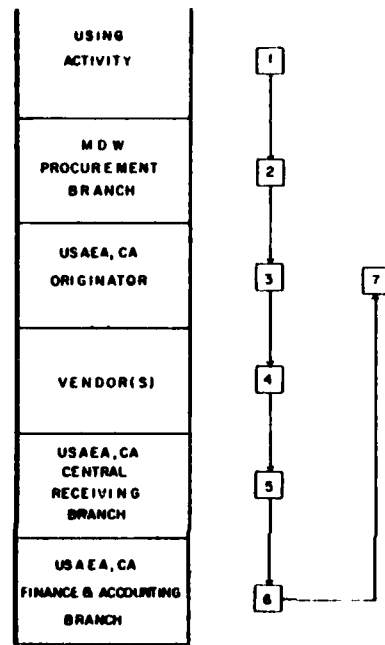


Figure H15. Imprest funds--all purchases (not over \$150, \$300 in emergencies).

5. The Central Receiving Branch receives the supplies and makes distribution.

6. The F&A Branch receives the completed SF Form 1165, verifies the supplies received, and reimburses the fund.

7. The USAEA,CA originator clears the suspense file.

Blanket Purchase Agreement Less Than \$10,000 (Baltimore District) (Figure H16)

1. The requesting activity asks for the service or item on DA Form 3953 (Purchase Request and Commitment).

2. The FMB certifies the availability of funds and forwards the request to procurement or to the person with the Blanket Purchase Agreement (BPA) calling authority.

3. The authorized individual in the MDW Procurement Branch places the call against an established BPA vendor (may be either procurement personnel or an authorized person with BPA authority).

4. The vendor receives the call and delivers the supplies in accordance with the BPA; a copy of the delivery ticket or sales slip is also delivered. A summary invoice requesting payment for deliveries made during the billing period is submitted at least monthly to the Baltimore District F&A Branch.

5. The requesting agency receives the materials or services, signs the delivery tickets or sales slip, and forwards the tickets through the FMB to the District F&A Branch. A copy is forwarded to the Procurement Office. The MDW Procurement Branch also receives a copy of the signed delivery ticket for its records.

6. The FMB reviews and forwards the delivery tickets or sales slips to the Baltimore District F&A Branch.

7. The Baltimore District F&A Branch matches the delivery tickets with the summary invoice and makes the appropriate payment to the vendor.

8. The vendor receives the payment.

Open-End A/E Work Orders (Figure H17)

1. The using agency initiates the requirement and prepares a Scope of Work.

2. The O&M Division processes the DA Form 4283 (Facilities Engineering Work Request) and forwards it to the Programs Branch of the Plans and Programs Division for review.

3. The Programs Branch reviews the document and obtains approval from the Director, USAEA,CA.

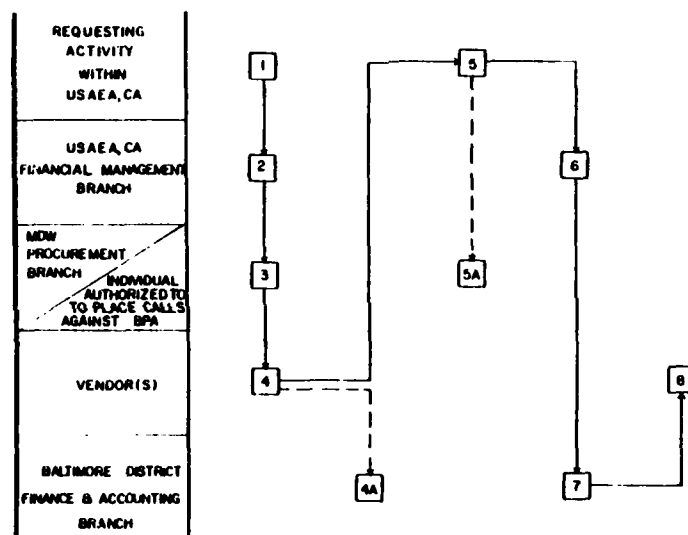


Figure H16. Blanket purchase agreement less than \$10,000 (Baltimore District).

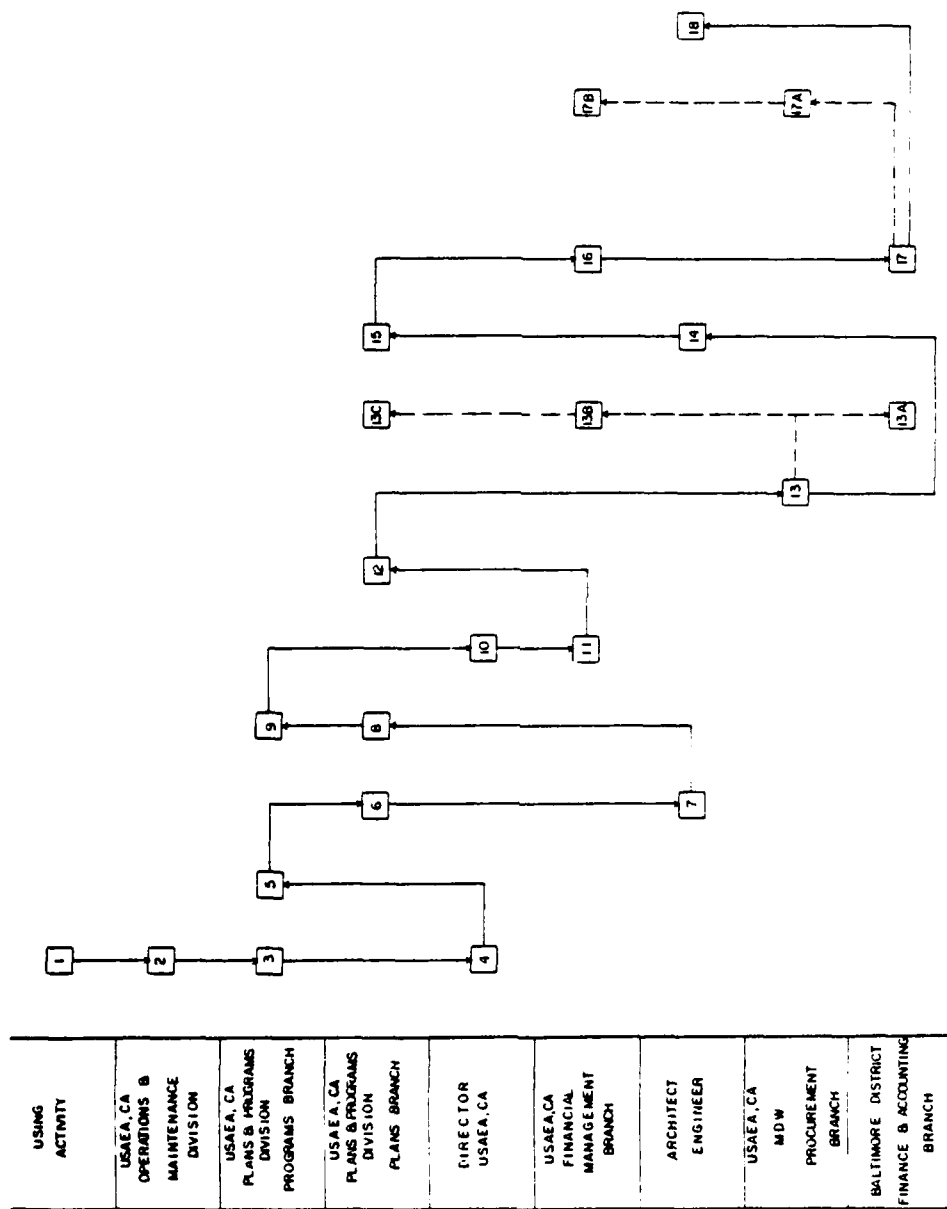


Figure H17. Open-end A/E work orders.

4. The Director, USAEA,CA, approves the DA Form 4283 and returns it to the Programs Branch.
5. The Programs Branch initiates DA Form 4285 (Engineer Design Format) and forwards it to the Plans Branch, along with the completed DA Form 4283.
6. The Plans Branch reviews and verifies the Scope of Work, and the Contracting Officers Representative (COR) prepares a request for proposal from the A/E firm by letter and prepares the government estimate.
7. The A/E prepares and submits a proposal.
8. The Plans Branch evaluates and negotiates the scope of work with the A/E, prepares DA Form 3953 (Purchase Request and Commitment), records the negotiations, and obtains the signature of the Plans and Programs Branch Chief.
9. The Programs Branch Chief signs and forwards the documents to the Director, USAEA,CA.
10. The Director approves and forwards the documents to FMB.
11. FMB certifies the availability of funds and returns the documents to the Plans Branch.
12. The Plans Branch forwards DA Form 3953 to the MDW Procurement Branch.
13. The MDW Procurement Branch reviews the document, obtains the signature of the Contracting Officer and forwards the executed Work Order to the A/E, with a copy furnished to the FMB, COR (Plans Branch) and to the Baltimore District F&A Branch.
14. The A/E receives the signed Work Order, performs the work, and submits an invoice to the COR Plans Branch.
15. The Plans Branch certifies the invoice and forwards it to the FMB. Upon completion of the work, the Plans Branch prepares DD Form 1413 (Performance Evaluation Architect, Engineer Professional Service) and forwards it to the Contracting Officer.
16. The FMB reviews and forwards the documents to Baltimore District F&A Branch for payment.
17. The F&A Branch reviews the documents and pays the A/E.
18. The A/E receives the payment.

APPENDIX I:

SURVEY QUESTIONNAIRES

OFFICE USE ONLY	
Type	1
Quest. #	_____
Installation #	_____
Study #	400

U.S. ARMY
Facilities Engineer
Work Force Questionnaire

1. Name of Shop/Plant/Office:

_____ 9-10

2. Number of years with Army Facilities Engineering and/or related work:

_____ years 11-12

3. Please circle the code number of the occupation/profession which best describes your present position:

- | | | |
|---|---|-------|
| Accountant/Acct. Technician . . . 01 | Firefighter/Fire Protection/
Specialist 12 | 13-14 |
| Administrative Officer/Asst. . . 02 | Housing Management Officer/
Project Manager Assistant 13 | |
| Boiler Plant Operator/Heating
Equipment Mach. 03 | Inspector 14 | |
| Budget Analyst 04 | Laborer 15 | |
| Clerk 05 | Management/Program Analyst . 16 | |
| Computer Programmer/Analyst/
Specialist 06 | Motor Vehicle Operator . . . 17 | |
| Craftsman 07 | Operations Officer 18 | |
| Engineer/Architect/Scientist . . 08 | Secretary/Steno/Clerk
Typist/Typist 19 | |
| Engineering Technician/
Draftsman 09 | Warehouseman/Supply Officer/
Clerk/Technician 20 | |
| Equipment Mechanic/Operator . . . 10 | Other (Specify) _____ | |
| Estimator/Planner/Scheduler . . . 11 | _____ 21 | |

Please circle the answer number which most closely describes your opinion of the following statements. Do you strongly agree, agree, disagree or strongly disagree? (Circle one number on each line)

	<u>Strongly agree</u>	<u>Agree</u>	<u>Disagree</u>	<u>Strongly disagree</u>	<u>No opinion</u>	
4. Most members of my branch take pride in their jobs	1	2	3	4	8	15
5. I usually have good informa- tion on where I stand and how my performance is evaluated . .	1	2	3	4	8	16
6. In this organization, things seem to happen contrary to rules and regulations	1	2	3	4	8	17
7. Planning and scheduling of work is done so that equipment is used efficiently	1	2	3	4	8	18
8. In this organization, about the only source of information on important matters is the grapevine (rumor)	1	2	3	4	8	19
9. Superiors keep well-informed about the needs and problems of people working here	1	2	3	4	8	20

10. To what extent are you required to meet rigid standards of quality in your work?

Almost always	1	21
To a great extent	2	
To some extent	3	
To a small extent	4	
Not at all	5	

11. Who checks the quality of your work? (Circle all that apply)

Supervisor	1	22
Customer	2	23
Yourself	3	24
Other (Specify) _____		
_____	4	25

12. In the last six months, what percent of your jobs have been delayed in starting because of . . .

- a. Lack of equipment (e.g. materials, machines, supplies, or vehicles)? _____ % of jobs 26-28
- b. Lack of manpower? _____ % of jobs 29-31

13. In the last six months what percent of your jobs have been delayed in being finished because of . . .

- a. Lack of equipment (e.g. materials, machines, supplies, or vehicles)? _____ % of jobs 32-34
- b. Lack of manpower? _____ % of jobs 35-37

	<u>Very satisfied</u>	<u>Satisfied</u>	<u>Dissatisfied</u>	<u>Very dissatisfied</u>	
14. Considering everything, how would you rate your overall satisfaction in your Branch at the present time?	1	2	3	4	38
15. Generally, how satisfied are you with the scheduling of your work?	1	2	3	4	39
16. Considering everything, how satisfied are you with your present job?	1	2	3	4	40
17. Overall, how good a job do you feel is being done by your immediate supervisor?					

Very good 1 41

Good 2

Fair 3

Poor 4

Very poor 5

18. How well does your supervisor recognize and reward good work?

He recognizes and rewards good work 1 42

He recognizes good work, but offers little reward . . 2

He does not recognize good work 3

19. Please circle the code number which most closely describes your answer to the following questions about your present supervisor. (Circle one number on each line)

To what extent does your supervisor . . .	To a great extent	To some extent	To a small extent	Not at all	
a. Emphasize high standards of performance?	1	2	3	4	43
b. Show you how to improve your performance?	1	2	3	4	44
c. Encourage the people who work with him to work as a team?	1	2	3	4	45

20. How would you feel about recommending this organization as a place to work to a prospective employee?

I would recommend it to most
prospective employees 1 46

I would recommend it with
reservations 2

I would not recommend it at all 3

21. From what you have heard, do you think the consolidation of Facilities Engineering organization will . . .

Help you in performing your job, . . . 1 47

Hinder you in performing your job, or . 2

Have little effect on your job? 3

22. Are you a supervisor or a non-supervisor?

Supervisor 1 48

Non-supervisor 2

Thank you very much for your cooperation.

Coder ID _____ 49-51

Keypunch ID _____ 52-54

55-79/BK
80/1

OFFICE USE ONLY

Type 2
 Quest. # _____
 Installation # _____
 Study # 400

U.S. ARMY
Facilities Engineer
Service Requester Questionnaire

1. How many years and/or months have you been an authorized service requester?

_____ years / _____ months

9-12

2. How many years and/or months have you been a service requester in your present building unit?

_____ years / _____ months

13-16

3. How would you rate the condition of your present building unit? (Circle one answer number)

Excellent 1

17

Better than average 2

Average 3

Below average 4

Poor 5

4. How many service calls have you made to the Facilities Engineer since last September? (Circle one)

None (Skip to Q.23) 1

18

1 to 5 2

6 to 15 3

16 to 25 4

26 to 50 5

51 to 100 6

More than 100 7

5. How satisfied are you with the service provided by the Facilities Engineer?

Very satisfied 1

19

Satisfied 2

Dissatisfied 3

Very dissatisfied 4

6. Do you have difficulty in reaching the work order clerk by telephone to request repair service?

No 1

20

Yes, I usually must dial 2 to 5 times 2

Yes, I usually must dial 6 times or more 3

Does not apply, I've never had to reach
 the work order clerk by phone 4

7. How many times must you usually call to have a repair crew come to your building unit for normal repair service? (Emergencies are covered in Q.9)

One	1
Two	2
Three	3
Four	4
Five or more	5
Does not apply, I've never telephoned for a <u>normal</u> repair (Skip to Q.9)	6

8. How long does it usually take after you telephone for normal repair service until a repairman shows up?

Less than 24 hours	1
24-48 hours	2
49-72 hours	3
73-96 hours	4
97 or more hours	5

9. How many times must you usually call to have a repair crew come for emergencies?

One	1
Two	2
Three	3
Four	4
Five or more	5
Does not apply, I've never telephoned for an <u>emergency</u> (Skip to Q.11)	6

10. How long does it usually take after you telephone for emergency repair service until a repairman shows up?

Less than 2 hours	1
2-4 hours	2
5-8 hours	3
9-24 hours	4
More than 24 hours	5

11. When calling for repair service, do you normally find the person you talk to knowledgeable?

Yes	1
No	2
Does not apply, I've never telephoned for a repair (Skip to Q.14)	3

12. When calling for repair service, do you normally find the person you talk to courteous?

Yes	1
No	2

13. When calling for repair service, do you normally find the person you talk to helpful?

Yes 1
No 2

14. Do you feel that the Facilities Engineer repairman responds quickly enough to your requests?

Always responds quickly enough 1
Usually responds quickly enough 2
Usually does not respond quickly enough . . . 3
Never responds quickly enough 4

15. The last time you requested repairs, how many repairmen arrived to do the work?

One 1
Two 2
Three 3
Four 4
Five or more 5
(Don't know) 8

16. Generally, is the number of repairmen who arrive to do work . . .

Too many, 1
Too few, or 2
Just about right? . . . 3
(Don't know) 8

17. Do the repairmen know what is to be repaired when they arrive?

Always know 1
Usually know 2
Usually do not know . . . 3
Never know 4

18. Is the repairman usually able to complete the work in one visit?

Yes (Skip to Q.21) 1
No, lacks tools or materials . . . 2
No, usually leaves for lunch, a
break or quitting time 3
No, leaves for unknown reasons . . . 4

19. Are you kept informed about the status of the repair job if it cannot be completed during the first visit?

Always 1
Usually 2
Seldom 3
Never 4

20. If the work is not completed during the first visit, how long does it normally take before the repair work is completed?

1 day 1
2 days 2
3 days 3
4-5 days 4
6 or more days . . . 5

21. Are the repairmen usually courteous?

Always 1
Usually 2
Seldom 3
Never 4
(Don't know) 5

22. Do the repairmen leave a clean work site?

They always leave a clean work site 1
They usually leave a clean work site 2
They usually do not leave a clean work site . . . 3
They never leave a clean work site 4

23. How many times has the Facilities Engineer inspected or visited your building since last September to perform preventive maintenance, i.e. maintenance you did not specifically request (oil motors, check furnace, check water heater, etc.)?

None 1
Once 2
2 times 3
3 times 4
4 times 5
5 or more 6

24. How would you rate the cleanliness and up-keep of restrooms, hallways, and office/work areas in your building?
(Circle one number on each line)

	Very good	Good	Fair	Poor	Very poor
a. Restrooms	1	2	3	4	5
b. Hallways	1	2	3	4	5
c. Office/work areas	1	2	3	4	5

25. Please make any comments on the maintenance/repair program in the space below.

Thank you very much for your cooperation.

Coder ID _____

Keypunch ID _____

4-1-64 BK
46/1

OFFICE USE ONLY	
Type	3
Quest. #	
Installation #	
Study #	100

U.S. ARMY
Facilities Engineer
Household Questionnaire

This survey should be completed by the member of the household who has had the most contact with the Facilities Engineer support personnel. Please circle the number for answer selected or write in appropriate answer when there are blanks.

1. How many years and/or months have you lived in government quarters?

_____ years / _____ months

2. How many other government family housing quarters have you lived in during the past 15 years?

_____ quarters

3. How many years and/or months have you lived in your present quarters?

_____ years / _____ months

4. How would you rate the condition of your present quarters? (Circle one answer number)

- Excellent 1
- Better than average 2
- Average 3
- Below average 4
- Poor 5

5. How many service calls have you had by the Facilities Engineer repair crew since last September?
(Circle one)

- None (Skip to Q.20) 1
- 1 to 3 2
- 4 to 6 3
- 7 to 10 4
- 11 to 15 5
- 16 or more 6

6. How satisfied are you with the service provided by the Facilities Engineer?

- Very satisfied 1
- Satisfied 2
- Dissatisfied 3
- Very dissatisfied 4

7. Do you have difficulty in reaching the work order clerk by telephone to request repair service?

- No 1
- Yes, I usually must dial 2 to 5 times 2
- Yes, I usually must dial 6 times or more 3
- Does not apply, I've never had to reach the work order clerk by phone 4

8. How many times must you usually call to have a repair crew come to your quarters for normal repair service?
(Emergencies are covered in Q.10)

One	1
Two	2
Three	3
Four	4
Five or more	5
Does not apply, I've never telephoned for a <u>normal</u> repair (Skip to Q.10) 6	

9. How long does it usually take after you telephone for normal repair service until a repairman shows up?

Less than 24 hours	1
24-48 hours	2
49-72 hours	3
73-96 hours	4
97 or more hours	5

10. How many times must you usually call to have a repair crew come to your quarters for emergencies?

One	1
Two	2
Three	3
Four	4
Five or more	5
Does not apply, I've never telephoned for an <u>emergency</u> (Skip to Q.12) 6	

11. How long does it usually take after you telephone for emergency repair service until a repairman shows up?

Less than 2 hours	1
2-4 hours	2
5-8 hours	3
9-24 hours	4
More than 24 hours	5

12. When calling for repair service, do you normally find the person you talk to knowledgeable?

Yes	1
No	2
Does not apply, I've never telephoned for a repair (Skip to Q.15) 3	

13. When calling for repair service, do you normally find the person you talk to courteous?

Yes	1
No	2

14. When calling for repair service, do you normally find the person you talk to helpful?

Yes	1
No	2

15. Do you have significant problems arranging a time for the repairman to gain access to your quarters?

- No 1
- Yes, nobody is usually home during the
Facilities Engineers service hours . . . 2
- Yes, but only when Facilities Engineer
tried to schedule routine maintenance
did not request 3

16. Do you feel that the Facilities Engineer repairman responds quickly enough to your requests?

- Always responds quickly enough . . . 1
- Usually responds quickly enough . . . 2
- Usually does not respond quickly
enough 3
- Never responds quickly enough . . . 4

17. Did you see any identification from the repairman? (Circle all that apply)

- Yes, ID card 1
- Yes, uniform 2
- Yes, patch on shirt 3
- Yes, insignia on truck 4
- No 5

18. Do you feel that repairmen should wear something distinctive to help you identify them (e.g., patch, insignia, etc.)? (Circle one)

- Yes, ID card with photo and number . . 1
- Yes, patch or insignia 2
- Yes, distinctive uniform 3
- Yes, other 4
- No, it is not necessary 5

19. The last time you needed repairs, how many repairmen arrived to do the work?

- One 1
- Two 2
- Three 3
- Four 4
- Five or more 5

20. Do the repairmen know what is to be repaired when they arrive?

- Always know 1
- Usually know 2
- Usually do not know 3
- Never know 4

21. Is the repairman usually able to complete the work in one visit?

- Yes (Skip to Q.24) 1
- No, lacks tools or materials 2
- No, usually leaves for lunch, a break,
or quitting time 3
- No, leaves for unknown reasons 4

22. Are you kept informed about the status of the repair job if it cannot be completed during the first visit?

Always 1
Usually 2
Seldom 3
Never 4

23. If the work is not completed during the first visit, how long does it normally take before the repair work is completed?

1 day 1
2 days 2
3 days 3
4-5 days 4
6 or more days 5

24. Are the repairmen courteous?

Always 1
Usually 2
Seldom 3
Never 4

25. Do the repairmen leave a clean work site?

They always leave a clean work site 1
They usually leave a clean work site 2
They usually do not leave a clean work site 3
They never leave a clean work site 4

26. How often do you make your own repairs using the "self help" program?

Never have made repairs 1
At least once a month 2
At least once every 2 months 3
At least once every 3 months 4
At least once every 6 months 5
At least once each year 6

27. How many times has the Facilities Engineer inspected or visited your quarters since last October to perform preventive maintenance, i.e., maintenance you did not specifically request (oil motors, check furnace, check water heater, etc.)?

None 1
Once 2
2 times 3
3 times 4
4 times 5
5 or more 6

28. Who filled out this questionnaire?

Sponsor 1
Dependent 2
Both 3

29. Please make any comments on the maintenance/repair program in the space below.

Thank you very much for your cooperation.

Code ID _____
Key punch ID _____

APPENDIX J:

DATA COLLECTION PROCEDURES

The following annexes describe the procedures used for collecting data for service order sampling, IJO sampling, contract project sampling, and standing operations orders sampling.

ANNEX J1:

SERVICE ORDERS SAMPLING PROCEDURE

Goals

The goal of work order sampling is to obtain a good estimate of work order performance. Estimates can be made from 16 percent (one of every six) of the total number of service orders (SOs) for each shop. The following data are required for each SO sampled:

1. Serial Number--A five-digit code (alphanumeric).
2. Start Date--The date that the SO was requested (e.g., 790312).
3. Shop Code--The two-digit code signifying which shop performed the SO.
4. Priority Number--The one-digit number indicating the importance of rapid job completion (e.g., 1, 2, or 3) (see Table AJ1).
5. Actual Labor Hours Worked--The total number of hours (i.e., manhours) worked on the SO. If Smith worked 2 hours and Jones worked 1 hour, 3.0 hrs is recorded.
6. Total Cost to Date--The total (labor + materials + equipment) cost to perform the SO in dollars and cents (e.g., \$34.16).

If available on the SO, the facility number (facility worked on), task code, and material cost associated with the SO should be recorded (Figure AJ1). Station numbers are not required. Since one goal is to obtain the total cost for each SO, this amount must be recorded if the SO reports it. However, if total cost is not shown on an SO, the material cost, shop code, and actual labor hours must be shown and recorded. If a sampled SO does not meet these information requirements, a different sample must be taken.

Procedures

1. Estimate the number of SOs for FY79 for each shop, and categorize as follows:

Fewer than 30 SOs

30 to 200 SOs

More than 200 SOs

This determines the sample size required for each shop. If a shop had more than 200 SOs, sample one out of every six SOs in the file for that shop. If a shop had between 30 and 200 SOs, sample one of every Xth SO to obtain a sample size of 30, where x can be determined as follows:

Example: Paint Shop
Estimated number of SOs = 75

Minimum required sample size = 30

$X = \text{Next smaller integer below } 75/30 = 2.5 \text{ } 75/30 - 2.5$

Thus, $X = 2$ (i.e., sample one of every two paint shop SOs).

If a shop had fewer than 30 SOs in FY79, sample every SO.

2. To begin sampling, use a random number table to identify the first SO to sample, then use the interval determined above. As an example, Table AJ2 was prepared for those shops with more than 200 SOs.

If a shop requires sampling of every second SO (as in the Paint Shop above), sampling would be done on, say, the third, fifth, seventh, etc., SOs.

The process is continued until all SOs for each shop have been processed. A count of the total number of SOs in each shop should be obtained in the process.

3. Some SOs chosen for sampling might not contain complete information. If, for example, the 23rd SO for the Paint Shop lacks total cost and material cost figures, the 22nd or 24th SO should be sampled for the required information. Sampling would then continue as above.

4. Each piece of information on the forms should be recorded right-justified (e.g., for the SO with serial number 20, it is recorded as shown on sample data in Figure AJ1).

A blank should be left if information such as facility number or task code is unavailable.

Labor hours should be recorded to the tenths place. Total cost and material costs should be recorded in dollars and cents as shown in Figure AJ1. Dates are recorded in the order of year, month, day, and zeros are included when necessary. Headings on each collection form used should be filled out.

Problems

The procedure given above assumes that the installation's SOs are filed by shop. If this is not the case, the procedure must be altered. The SO files should be searched serially (one of every six) with a random start. The count for each shop should be checked to determine if a 16 percent sample for each shop was obtained. It may be possible to collect the needed information directly from IPS reports instead of manually searching original SO documents.

Summary Sheet

A summary sheet should be compiled which indicates the total number of SOs in FY79 for each shop and the total number of SOs for each shop.

Table AJ1

SERVICE ORDER PRIORITIES

<u>Priority</u>	<u>Definition</u>	<u>Required Completion Time</u>
1	Emergency work that may jeopardize individual health, safety, or welfare.	24 hours
2	Urgent work which could become an emergency if not completed or work which affects morale.	3 days
3	Routine work.	7 days

Table AJ2

Number of First SO to Sample for Each Shop
With Over 200 SOs Per Year

<u>Shop #</u>	<u>First SO To Record*</u>	<u>Second & Following SO To Record (First + 6)</u>
1	5	11
2	1	7
3	5	11
4	6	12
5	1	7
6	3	9
7	5	11
8	4	10
9	1	7
10	6	12
11	6	12
12	3	9
13	1	7
14	2	9
15	1	7
16	4	10

*From random number table.

ANNEX J2:

IJO SAMPLING PROCEDURE

Goals

The goal of IJO sampling is to obtain a good estimate of work order performance and of FE work order administrative processing time. A 16 percent sample (one of six) of the total number of IJOs will give an adequate sample.

Different information will be required for each of the three categories of IJOs: in-house, contract, and EPS (Engineering Performance Standard) estimated IJOs. Special forms (see Figure 8J1) are available to collect the information required for IJOs (Table 8J1).

Procedure

The procedure for sampling in-house and contract IJOs is the same as that used for sampling SOs. A 16 percent sample, or 30 IJOs, whichever is greater, for each shop will provide an adequate sample. The EPS-estimated IJOs should be sampled at 100 percent. The FE and the data collection team leader should discuss how EPS IJOs can be identified from the other types of IJOs and whether they can be pulled from the files readily.

A summary sheet of the total number of IJOs and the number sampled should be recorded. The total number of EPS IJOs and the number sampled per shop should also be recorded.

Problems

The sampling procedure assumes that the work orders are filed by shop. If they are not, the procedure must be modified.

At some installations, certain dates are very seldom recorded, such as the dates to design, estimate, and schedule, the date to bid, or the date of purchase request data. If a significant number of these dates is not recorded on the work orders in the files, the work order document should be compared to the job order or IJO register. If the information obtainable from the files is on the IJO register, this register should be copied, and sampling from the files will not be necessary.

OFFICE SYMBOL _____
TELEPHONE _____

LJO DATA COLLECTION FORM (Part 1) -- Ft. Belvoir

SHEET OF SHEETS

[illegible]

CERL Form 128
20 April 1975

Figure B11. IJO data collection form.

1300 DATA COLLECTION FORM (Part 1)

DATE _____

EPS ID NUMB.	SHOP CODE	EST. LABOR	ACTUAL LABOR	EST. COST	ACTUAL COST	WORK DESCRIPTION	
						1	2
1	1	152.0	150.0			INSTALL	DOOR
2	1						
3	1						
4	1						
5	1						
6	1						
7	1						
8	1						
9	1						
10	1						
11	1						
12	1						
13	1						
14	1						
15	1						
16	1						
17	1						
18	1						
19	1						
20	1						
21	1						
22	1						
23	1						
24	1						
25	1						
26	1						
27	1						
28	1						
29	1						
30	1						
31	1						
32	1						
33	1						
34	1						
35	1						
36	1						
37	1						
38	1						
39	1						
40	1						
41	1						
42	1						
43	1						
44	1						
45	1						
46	1						
47	1						
48	1						
49	1						
50	1						
51	1						
52	1						
53	1						
54	1						
55	1						
56	1						
57	1						
58	1						
59	1						
60	1						
61	1						
62	1						
63	1						
64	1						
65	1						
66	1						
67	1						
68	1						
69	1						
70	1						
71	1						
72	1						
73	1						
74	1						
75	1						

Figure BJI. (Cont'd).

Table BJ1
Information Required for IJOs

<u>Information</u>	<u>Type of IJO</u>
1. Job ID	Disregard
2. Req ID-Requestor ID: number designated by FE to each user of FE services	All
*3. Serial number--five-digit code (alphanumeric)	All
*4. JOB TYP--enter: JOB = CON = EPS =	In-house Contract engineering performance standard estimated
*5. P--Priority	All
*6. # PH--the number of phases: number of shops that work on each IJO. If one shop works on a job twice, count it as two phases	In-House, EPS
7. JOB TITLE--15-character description of job (alpha)	All
8. FACILITY NUMBER--Number of facilities worked on	All
*9. DATE OF REQUEST--date IJO was requested (YY,MM,DD)	All
*10. DATE OF FE RECOMMENDATION	All
*11. DATE OF APPROVAL	All
*12. DATE TO DESIGN	All
*13. DATE TO ESTIMATOR	All
*14. DATE TO MATERIAL COORDINATOR	In-House, EPS
*15. DATE TO SCHEDULER	In-House, EPS
*16. DATE TO SHOP	In-House, EPS

*Required information.

Table BJ1. (Cont'd).

<u>Information</u>	<u>Type of IJO</u>
*17. RECORDED COMPLETION DATE	All
*18. IFS COMPLETION DATE (if applicable)	All
*19. ESTIMATED LABOR HRS--record to tenths of hours (x.x hrs)	All
*20. ACTUAL LABOR--actual number of hours worked. If Smith worked 2 hours and Jones worked 2 hours, record 4 hours.	All
*21. ESTIMATED COST (\$\$,cc)	All
*22. ACTUAL COST--the total cost (labor + maintenance + equipment) to perform IJO	All
*23. DATE OF PURCHASE REQUEST	Contract
*24. DATE TO BID	Contract
*25. DATE BID AWARDED	Contract
*26. EPS CARD NUMBER	Disregard
*27. EPS ID NUMBER	EPS
*28. ESTIMATED LABOR--EPS estimated labor	EPS
*29. ACTUAL LABOR	EPS
*30. ESTIMATED COST--EPS estimated cost	EPS
*31. ACTUAL COST	EPS
*32. WORK DESCRIPTION EPS	

*Required information.

ANNEX J3:

CONTRACT PROJECT SAMPLING PROCEDURE

Goals

The goal of contract sampling is to obtain an estimate of contract administrative responsiveness. The contracts to be sampled are those OMA-funded contracts completed in FY79 which cost more than \$10,000. A 100-percent sample should be taken. The information can be taken either from FE files or from the official contract files in the Procurement Office. The following required information is recorded on a special form (see Figure CJ1). Necessary elements are asterisked.

Information Required

1. STA--Station: This is the installation where data is being collected (Belvoir, WRAMC, DMA). Disregard.
2. JOB NUMBER--Seven-digit alphanumeric locally assigned job identification number. This is not the contract number.
3. TYPE--Type of design. Enter: AE for architect/engineer-designed or IH for in-house-designed; enter DE for District Engineer.
4. PROJECT DESCRIPTION--12-digit alphanumeric project description.
5. PROJECT COST--Dollar cost of construction portion.

DATA COLLECTOR _____ OFFICE SYMBOL _____
DATE _____ TELEPHONE _____

DESIGN PROJECT DATA COLLECTION FORM -- Ft. Belvoir

SHEET OF SHEETS

STA	JOB NUMBER	TYPE	PROJECT DESCRIPTION	PROJECT COST		DESIGN START DATE P B C	DESIGN COMPLETE DATE DATE OF WORK REQUEST	REVIEW APPROVAL DATE CONTRACT AWARD DATE	FUNDING APPROVAL DATE
				COST	COST				
1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9	9
10	10	10	10	10	10	10	10	10	10
11	11	11	11	11	11	11	11	11	11
12	12	12	12	12	12	12	12	12	12
13	13	13	13	13	13	13	13	13	13
14	14	14	14	14	14	14	14	14	14
15	15	15	15	15	15	15	15	15	15
16	16	16	16	16	16	16	16	16	16
17	17	17	17	17	17	17	17	17	17
18	18	18	18	18	18	18	18	18	18
19	19	19	19	19	19	19	19	19	19
20	20	20	20	20	20	20	20	20	20
21	21	21	21	21	21	21	21	21	21
22	22	22	22	22	22	22	22	22	22
23	23	23	23	23	23	23	23	23	23
24	24	24	24	24	24	24	24	24	24
25	25	25	25	25	25	25	25	25	25
26	26	26	26	26	26	26	26	26	26
27	27	27	27	27	27	27	27	27	27
28	28	28	28	28	28	28	28	28	28
29	29	29	29	29	29	29	29	29	29
30	30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31	31
32	32	32	32	32	32	32	32	32	32
33	33	33	33	33	33	33	33	33	33
34	34	34	34	34	34	34	34	34	34
35	35	35	35	35	35	35	35	35	35
36	36	36	36	36	36	36	36	36	36
37	37	37	37	37	37	37	37	37	37
38	38	38	38	38	38	38	38	38	38
39	39	39	39	39	39	39	39	39	39
40	40	40	40	40	40	40	40	40	40
41	41	41	41	41	41	41	41	41	41
42	42	42	42	42	42	42	42	42	42
43	43	43	43	43	43	43	43	43	43
44	44	44	44	44	44	44	44	44	44
45	45	45	45	45	45	45	45	45	45
46	46	46	46	46	46	46	46	46	46
47	47	47	47	47	47	47	47	47	47
48	48	48	48	48	48	48	48	48	48
49	49	49	49	49	49	49	49	49	49
50	50	50	50	50	50	50	50	50	50
51	51	51	51	51	51	51	51	51	51
52	52	52	52	52	52	52	52	52	52
53	53	53	53	53	53	53	53	53	53
54	54	54	54	54	54	54	54	54	54
55	55	55	55	55	55	55	55	55	55
56	56	56	56	56	56	56	56	56	56
57	57	57	57	57	57	57	57	57	57
58	58	58	58	58	58	58	58	58	58
59	59	59	59	59	59	59	59	59	59
60	60	60	60	60	60	60	60	60	60
61	61	61	61	61	61	61	61	61	61
62	62	62	62	62	62	62	62	62	62
63	63	63	63	63	63	63	63	63	63
64	64	64	64	64	64	64	64	64	64
65	65	65	65	65	65	65	65	65	65
66	66	66	66	66	66	66	66	66	66
67	67	67	67	67	67	67	67	67	67
68	68	68	68	68	68	68	68	68	68
69	69	69	69	69	69	69	69	69	69
70	70	70	70	70	70	70	70	70	70
71	71	71	71	71	71	71	71	71	71
72	72	72	72	72	72	72	72	72	72
73	73	73	73	73	73	73	73	73	73
74	74	74	74	74	74	74	74	74	74
75	75	75	75	75	75	75	75	75	75
76	76	76	76	76	76	76	76	76	76
77	77	77	77	77	77	77	77	77	77
78	78	78	78	78	78	78	78	78	78
79	79	79	79	79	79	79	79	79	79
80	80	80	80	80	80	80	80	80	80
81	81	81	81	81	81	81	81	81	81
82	82	82	82	82	82	82	82	82	82
83	83	83	83	83	83	83	83	83	83
84	84	84	84	84	84	84	84	84	84
85	85	85	85	85	85	85	85	85	85
86	86	86	86	86	86	86	86	86	86
87	87	87	87	87	87	87	87	87	87
88	88	88	88	88	88	88	88	88	88
89	89	89	89	89	89	89	89	89	89
90	90	90	90	90	90	90	90	90	90
91	91	91	91	91	91	91	91	91	91
92	92	92	92	92	92	92	92	92	92
93	93	93	93	93	93	93	93	93	93
94	94	94	94	94	94	94	94	94	94
95	95	95	95	95	95	95	95	95	95
96	96	96	96	96	96	96	96	96	96
97	97	97	97	97	97	97	97	97	97
98	98	98	98	98	98	98	98	98	98
99	99	99	99	99	99	99	99	99	99
100	100	100	100	100	100	100	100	100	100

CERL Form 128
20 April 1975

Figure CJI. Design project data collection form.

ANNEX J4:

STANDING OPERATION ORDERS DATA COLLECTION PROCEDURE

Goals

The objective of the Standing Operation Orders (SOO) data collection is to obtain information on the sampling forms (see Figure DJ1) for all the SOOs at the installation.

The following data are to be recorded for each SOO:

1. Serial Number--maximum eight-digit code used for identification.
2. Description--maximum of 29 letters describing the work done.
3. Start Date--the first date on which the SOO goes into effect. This is recorded in the order of year, month, day (e.g., 790101). (See Figure DJ1.)
4. Labor Hours--the number of hours worked on the SOO during FY79. This is recorded up to the tenths place (e.g., 80.0).
5. Total Cost--the total cost (labor + materials + equipment charges) of performing the SOO. This is recorded in dollars and cents (e.g., \$158.06).

Procedure

The above information is to be recorded right-justified for each SOO. Figure DJ1 is a sample collection form with an example SOO recorded. Headings should be filled in for each SOO data collection form.

OFFICE SYMBOL _____
TELEPHONE _____

S00 DATA COLLECTION FORM -- DPA

SHEET 30 OF 33 SHEETS

SERIAL NUMBER		DESCRIPTION		START DATE	LABOR HOURS	TOTAL COST
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	32	33	34	35
36	37	38	39	40	41	42
43	44	45	46	47	48	49
50	51	52	53	54	55	56
57	58	59	60	61	62	63
64	65	66	67	68	69	70
71	72	73	74	75	76	77
78	79	80	81	82	83	84
85	86	87	88	89	90	91
92	93	94	95	96	97	98
99	100	101	102	103	104	105
106	107	108	109	110	111	112
113	114	115	116	117	118	119
120	121	122	123	124	125	126
127	128	129	130	131	132	133
134	135	136	137	138	139	140
141	142	143	144	145	146	147
148	149	150	151	152	153	154
155	156	157	158	159	160	161
162	163	164	165	166	167	168
169	170	171	172	173	174	175
176	177	178	179	180	181	182
183	184	185	186	187	188	189
190	191	192	193	194	195	196
197	198	199	200	201	202	203
204	205	206	207	208	209	210
211	212	213	214	215	216	217
218	219	220	221	222	223	224
225	226	227	228	229	230	231
232	233	234	235	236	237	238
239	240	241	242	243	244	245
246	247	248	249	250	251	252
253	254	255	256	257	258	259
260	261	262	263	264	265	266
267	268	269	270	271	272	273
274	275	276	277	278	279	280
281	282	283	284	285	286	287
288	289	290	291	292	293	294
295	296	297	298	299	300	301
302	303	304	305	306	307	308
309	310	311	312	313	314	315
316	317	318	319	320	321	322
323	324	325	326	327	328	329
330	331	332	333	334	335	336
337	338	339	340	341	342	343
344	345	346	347	348	349	350
351	352	353	354	355	356	357
358	359	360	361	362	363	364
365	366	367	368	369	370	371
372	373	374	375	376	377	378
379	380	381	382	383	384	385
386	387	388	389	390	391	392
393	394	395	396	397	398	399
400	401	402	403	404	405	406
407	408	409	410	411	412	413

CERT Form 128

20 April 1975

Figure D1. S00 data collection form.

APPENDIX K:

MDW INTERSERVICE SUPPORT AGREEMENTS

ISSA CATEGORIES OF SUPPORT

AF - CUSTODIAL

AH - FIRE PROTECTION

AJ - HOUSING/LODGING

AN - STORAGE/WAREHOUSING

AP - UTILITIES

AU - ADMINISTRATIVE OFFICE SPACE

AW - REAL PROPERTY MAINTENANCE
M&R - Maintenance and Repair
M/C - Minor Construction

AX - DISPOSAL SERVICES

BM - ENTOMOLOGY SERVICES

BN - ICE AND SNOW REMOVAL

NR = non-reimbursable support
R = reimbursable support

INTER/INTRA SERVICE SUPPORT AGREEMENTS - ISSA's

ACTIVITY	CATEGORY OF SUPPORT									
	AF	AH	AJ	AN	AP	AU	AW	AX	BA	BN
DEPARTMENT OF DEFENSE										
Defense Communications Agency										
Defense Intelligence Agency										
Defense Investigative Service										
Defense Language Institute Liaison Office										
Defense Logistics Agency										
Defense Mapping Agency Hydrographic/Topographic Center										
Defense Supply Service - Washington										
Military Traffic Management Command										
National Defense University										
OTHER INTER-SERVICE										
National Guard Bureau, Washington										
Tri-Service Cantonment										
USAMC, Henderson Hall										
US ARMY (INTRA-SERVICE)										
ATCA Aeronautical Services Office										
Audiovisual Center, The Pentagon										
Ballistic Missile Defense Program Office										
Command and Control Support Agency										
Command Information Unit										
Communications-Electronics Installation Agency										
Communications Command, MDW										
Computer Systems Selection and Acquisition Agency										

* M&R beyond DA Standards - reimbursable

INTER/INTRA SERVICE SUPPORT AGREEMENTS - ISSA's

ACTIVITY	CATEGORY OF SUPPORT										
	AF	AH	AJ	AN	AP	AU	AW	AX	BN	GN	
Concepts Analysis Agency		NR	NR				NR				
Courier Service			NR								
Criminal Investigation Command			NR								
Electronics Command, Night Vision Laboratory							NR				
Material Development and Readiness Command											
Engineer Center and Fort Belvoir											
Intelligence Security Command											
Institute of Heraldry, TAGCEN	NR	NR		NR	NR	NR	R	NR	NR	NR	
Legal Service Agency											
Management Systems Support Agency											
Military Personnel Center											
Personnel Affairs Dir, TAGCEN - Arlington National Cemetery		R			R		R				
Recruiting Support Center	NR	NR		NR	NR	NR	R		NR	NR	
Research, Development & Acquisition Information Systems Agency											
Security Group											
USAG, Arlington Hall Station											
Walter Reed Army Medical Center	NR	NR	NR	NR	NR	NR	R	NR	NR	NR	
Washington District, Criminal Investigation Command	NR	NR	NR	NR	NR	NR	R	NR	NR	NR	
7th Signal Command							R				
67th Ordnance Detachment	NR	NR	NR	NR	NR	NR	R	NR	NR	NR	
REVENUE PRODUCING - MILITARY											
Capital Exchange Region	NR	NR		R	NR	NR*	R	R	NR	NR	
MCU Commissaries		NR		R		NR*	R	NR	NR	NR	
Washington Area Exchange											

AD-A142 150

RPMA (REAL PROPERTY MAINTENANCE ACTIVITIES)
CONSOLIDATION ACTIVITIES IN T. (U) CONSTRUCTION
ENGINEERING RESEARCH LAB (ARMY) CHAMPAIGN IL

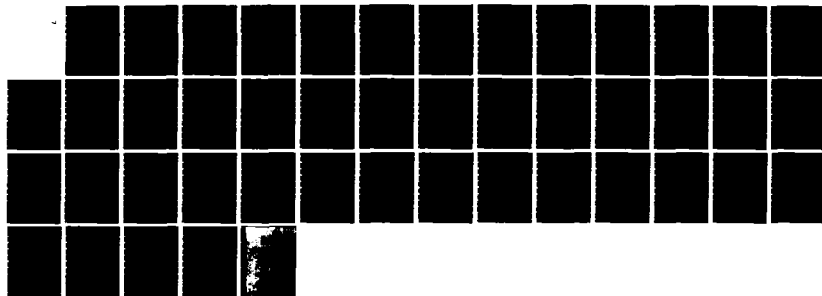
4/4

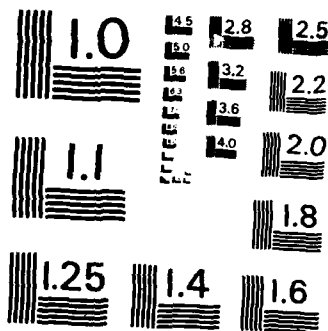
UNCLASSIFIED

R BLACKMON MAY 84 CERL-TR-P-156-VOL-1

F/G 5/1

NL





MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

INTER/INTRA SERVICE SUPPORT AGREEMENTS - ISSA's

ACTIVITY	CATEGORY OF SUPPORT									
	AF	AH	AJ	AN	AP	AU	AU	AX	BM	BN
							M&R	N/C		
US GOVERNMENT, NON-DOO										
Federal Bureau of Investigation		NR								
National Park Service - Arlington House		R			R					
NON US GOVERNMENT										
American Bank of Virginia		NR			R					
Cameron Station Federal Credit Union	R	NR			R			NR	NR	NR
Inter-American Defense College		R	NR		R			R	R	R
Fort McNair Federal Credit Union	R	NR			R			R	NR	NR
Fort Myer Federal Credit Union	R	NR			R			R	NR	NR

APPENDIX L:

DETAILED PROCESS--WORK REQUEST

This appendix describes the individual activities and interfaces shown in Figure 68. The diagram has been developed by organization element. Responsibilities for a specific organization can be easily determined by reading the activity numbers in the horizontal slice of Figure 68 for the selected organization and referencing those numbers in the paragraphs of this appendix.

<u>ARRIVES FROM</u>	<u>STEP NUMBER & DESCRIPTION</u>	<u>GOES TO</u>
START	1. <u>REQUESTER:</u> SUBMITS REQUIREMENT AND JUSTIFICATION ON JOB ORDER REQUEST (JOR-DA FORM 4283) FOR ALL WORK REQUIRING MORE THAN 40 HOURS OF LABOR AND/OR MORE THAN \$350 OF MATERIAL.	APPROVING ENGINEER (STEP 17)
	-OR-	
	CALLS SERVICE ORDER DESK FOR ALL WORK REQUIRING LESS THAN 40 HOURS OF LABOR AND LESS THAN \$350 OF MATERIAL.	SERVICE ORDER CLERK (STEP 2)
	-OR-	
REQUESTER	2. <u>SERVICE ORDER CLERK:</u> DETERMINES THAT REQUESTED WORK INVOLVES MAINTENANCE OR REPAIR TO EQUIPMENT OR THE FACILITY. (K)	SERVICE ORDER CLERK (STEP 3)
	-OR-	
	DETERMINES THAT REQUESTED WORK INVOLVES INSTALLATION OF EQUIPMENT OR ALTERATION OF A FACILITY. (L)	SERVICE ORDER CLERK (STEP 4)
SERVICE ORDER CLERK (STEP 2)	3. <u>SERVICE ORDER CLERK:</u> KEYS ALL REQUIRED DATA INTO THE SERVICE ORDER TEMPLATE ON THE CRT; ENTERING "K" IN THE WORK CLASS CODE COLUMN. RESULTS IN GENERATION OF XFN AND XFP IFS INPUT.	SHOPS (STEP 6)
WORK ORDER CLERK (STEP 21)	IF REQUIRED DATA IS KEYED FROM A WORK REQUEST (4283) CONVERTED TO A SERVICE ORDER RECEIVED FROM THE WORK ORDER CLERK OR THE RPMM THEN: (A) ANNOTATE THE SO DOCUMENT NUMBER ON THE 4283 AND RETURN TO THE WORK ORDER CLERK FOR DIS-APPROVAL ACTION (STEP X): (B) PREPARE 4284 IFS INPUT TRANS-ACTION (XFDC) WITH SO DOCUMENT NUMBER IN THE REMARKS FIELD AND FORWARD TO AUTOMATED SYSTEMS	
RPMM (STEP 24)		

<u>ARRIVES FROM</u>	<u>STEP NUMBER & DESCRIPTION</u>	<u>GOES TO</u>
SERVICE ORDER CLERK (STEP 2)	4. <u>SERVICE ORDER CLERK:</u> KEYS ALL REQUIRED DATA INTO THE SERVICE ORDER TEMPLATE ON THE CRT; ENTERING "L" IN WORK CLASS CODE COLUMN. RESULTS IN GENERA- TION OF XFN AND XFP IFS INPUT.	CHIEF, WORK RECEPTION (STEP 5)

SERVICE ORDER CLERK (STEP 4)	5. <u>CHIEF, WORK RECEPTION:</u> DETERMINES THAT "L" WORK REQUESTED TO BE DONE ON A SO IS VALID AND CAN BE ACCOMPLISHED ON A SO. APPROVES SO AND ENSURES IT IS TRANSMITTED TO THE SHOPS.	SHOPS (STEP 6)
------------------------------------	---	-------------------

-OR-

DETERMINES THAT "L" WORK REQUESTED TO BE DONE ON
A SO IS NOT VALID AND/OR CAN NOT BE ACCOMPLISHED
ON A SO. INFORMS REQUESTER TO SUBMIT A WORK RE-
QUEST (4283) AS REQUIRED. CANCELS SO AND ENSURES
CANCELLATION IS ACCOMPLISHED IN THE WANG "L" WORK
SO FILE.

CANCEL

SERVICE ORDER CLERK (STEP 3)	6. <u>SHOPS:</u> DETERMINES THAT ALL REQUIRED MATERIALS TO COMPLETE THE SO ARE AVAILABLE IN SHOP STOCK.	SHOPS (STEP 15)
------------------------------------	--	--------------------

-OR-

CHIEF, WORK RECEPTION (STEP 5)	DETERMINES THAT SOME OR NONE OF THE REQUIRED MATERIALS ARE AVAILABLE IN SHOP STOCK. PREPARES MATERIAL ORDER FORM(S) AND FORWARDS TO STORAGE BRANCH.	STORAGE BRANCH (STEP 7)
--------------------------------------	---	----------------------------

ARRIVES FROM

STEP NUMBER & DESCRIPTION

GOES TO

SHOPS
(STEP 6)

7. STORAGE BRANCH: DETERMINES THAT MATERIALS REQUESTED BY THE SHOP TO COMPLETE THE SO ARE AVAILABLE IN WAREHOUSE STOCK.

STORAGE BRANCH
(STEP 14)

-OR-

DETERMINES THAT MATERIALS REQUESTED BY THE SHOP TO COMPLETE THE SO ARE NOT AVAILABLE IN WAREHOUSE STOCK AND MUST BE PROCURED.

PROPERTY CONTROL
BRANCH
(STEP 8)

STORAGE BRANCH
(STEP 7)

8. PROPERTY CONTROL BRANCH: DETERMINES THAT REQUESTED MATERIALS HAVE A NATIONAL STOCK NUMBER AND ARE TO BE ORDERED THROUGH NICP.

PROPERTY CONTROL
BRANCH
(STEP 12)

-OR-

DETERMINES THAT REQUESTED MATERIALS DO NOT HAVE A NATIONAL STOCK NUMBER AND ARE TO BE ORDERED THROUGH EITHER A BPA OR DCSAQ PROCEDURES.

PROPERTY CONTROL
BRANCH
(STEP 9)

PROPERTY CONTROL
BRANCH
(STEP 8)

9. PROPERTY CONTROL BRANCH: DETERMINES THAT REQUESTED MATERIALS COST \$500 OR LESS AND A BPA EXISTS.

PROPERTY CONTROL
BRANCH
(STEP 10)

-OR-

DETERMINES THAT REQUESTED MATERIALS COST MORE THAN \$500 AND/OR A BPA DOES NOT EXIST.

PROPERTY CONTROL
BRANCH
(STEP 11)

<u>ARRIVES FROM</u>	<u>STEP NUMBER & DESCRIPTION</u>	<u>GOES TO</u>
PROPERTY CONTROL BRANCH (STEP 9)	10. <u>PROPERTY CONTROL BRANCH:</u> ORDERS REQUESTED MATERIALS COSTING \$500 OR LESS, UTILIZING EXISTING BPA LOCAL PROCUREMENT PROCEDURES.	PROPERTY CONTROL BRANCH (STEP 13)
PROPERTY CONTROL BRANCH (STEP 9)	11. <u>PROPERTY CONTROL BRANCH:</u> ORDERS REQUESTED MATERIALS COSTING MORE THAN \$500 FOR WHICH NO BPA EXISTS UTILIZING DCSAQ PROCEDURES.	PROPERTY CONTROL BRANCH (STEP 13)
PROPERTY CONTROL BRANCH (STEP 8)	12. <u>PROPERTY CONTROL BRANCH:</u> ORDERS REQUESTED MATERIALS THAT HAVE A NATIONAL STOCK NUMBER UTILIZING NICP PROCEDURES.	PROPERTY CONTROL BRANCH (STEP 13)
PROPERTY CONTROL BRANCH (STEPS 10, 11, 12)	13. <u>PROPERTY CONTROL BRANCH:</u> RECEIVES ISSUE AND RECEIPT DOCUMENTS FROM STORAGE BRANCH. PREPARES REQUIRED IFS INPUT DATA DOCUMENTS (ZM1) AND FORWARDS TO AUTOMATED SYSTEMS.	STORAGE BRANCH (STEP 14)
STORAGE BRANCH (STEP 7)	14. <u>STORAGE BRANCH:</u> PROVIDES MATERIALS REQUESTED TO COMPLETE SO TO THE SHOP. MATERIALS ARE EITHER ISSUED FROM WAREHOUSE STOCK OR FROM RECEIPT OF PROCURED MATERIAL.	SHOPS (STEP 15)

-AND-

PROVIDES WAREHOUSE STOCK ISSUE DOCUMENTS AND
VENDOR RECEIPT DOCUMENTS TO PROPERTY CONTROL
BRANCH FOR ENTRY INTO IFS. (STEP 13)

ARRIVES FROM

STEP NUMBER & DESCRIPTION

GOES TO

SHOPS
(STEP 6)

SCHEDULER
(STEP 16)

15. SHOPS: UTILIZES SHOP STOCK MATERIALS OR ORDERED MATERIALS FROM THE STORAGE BRANCH TO ACCOMPLISH REQUESTED SO WORK. PREPARES REQUIRED L&E CARD ENTRIES (FM1 TRANSACTION) TO REPORT WORK DONE ON THE SO AND FORWARDS L&E CARDS TO THE FINANCIAL MANAGEMENT BRANCH. FORWARDS COMPLETED SO FORM TO THE SCHEDULER.

SHOPS
(STEP 15)

COMPLETE

16. SCHEDULER: RECEIVES COMPLETED SO FROM THE SHOPS AND FORWARDS TO THE SERVICE ORDER CLERK FOR FILLING.

REQUESTER
(STEP 1)

APPROVING ENGINEER
(STEP 18)

17. APPROVING ENGINEER: DETERMINES THAT THE WORK IS NEEDED.

CHIEF, B&G
(STEP C)

WORK ORDER CLERK
(STEP X)

IF THERE IS NO NEED FOR THE WORK AS IT DUPLICATES WORK ALREADY IN PROCESS, THE JOB WILL BE DISAPPROVED AND RETURNED TO THE REQUESTOR. THE REASON FOR DISAPPROVAL WILL BE ANNOTATED IN THE REMARKS BLOCK OF THE 4283.

-OR-

APPROVING ENGINEER
(STEP 17)

RPMM (STEP 20)

18. APPROVING ENGINEER: SIGNS THE APPROVAL SECTION OF THE 4283, AND PLACES A MAXIMUM JOB ESTIMATE FOR WHICH THIS WORK IS APPROVED.

-OR-

IF WORK IS REQUESTED BY THE APPROVING ENGINEER, SIGNS THE APPROVAL SECTION OF THE 4283, PLACES A PLACES A MAXIMUM JOB ESTIMATE AND FORWARDS TO POST COMMANDER.

POST COMMANDER
(STEP 19)

<u>ARRIVES FROM</u>	<u>STEP NUMBER & DESCRIPTION</u>	<u>GOES TO</u>
APPROVING ENGINEER (STEP 18)	19. <u>POST COMMANDER:</u> DETERMINES IF WORK SHOULD BE DIS- APPROVED. ANNOTATES REASON FOR DISAPPROVAL IN REMARKS BLOCK OF 4283.	WORK ORDER CLERK (STEP X)
	-OR-	
	SIGNS 4283 IN THE REMARKS BLOCK, AND ASSIGNS A PRIORITY (1 THROUGH 3)	RPM (STEP 20)
POST COMMANDER (STEP 19)	20. <u>RPM:</u> DETERMINES IF WORK SHOULD BE ACCOMPLISHED ON A SERVICE ORDER (SO). ATTACHES A NOTE TO THE 4283 INDICATING THAT WORK SHOULD BE ACCOM- PLISHED ON AN SO.	WORK ORDER CLERK (STEP 21)
	-OR-	
	NOTES HOW WORK SHOULD BE ACCOMPLISHED - IN - HOUSE, CONTRACT LESS THAN \$10,000, OR CONTRACT GREATER THAN \$10,000. DETERMINES IF ENVIRON- MENTAL ACTION IS REQUIRED AND ANNOTATES 4283.	WORK ORDER CLERK (STEP 21)
RPM (STEP 20)	21. <u>WORK ORDER CLERK:</u> IF RPM INDICATED THAT WORK WAS TO BE DONE ON AN SO FORWARDS A COPY OF 4283 TO SO CLERK WHO ANNOTATES THE SO DOCUMENT NUMBER IN THE REMARKS FIELD OF THE XFD TRANSACTION. SO CLERK RETURNS ANNOTATED 4283 TO WORK ORDER CLERK FOR DISAPPROVAL ACTION.	SO CLERK (STEP 3)
	-OR-	
	CONTINUES PROCESSING 4283.	WORK ORDER CLERK (STEP 22)

<u>ARRIVES FROM</u>	<u>STEP NUMBER & DESCRIPTION</u>	<u>GOES TO</u>
WORK ORDER CLERK (STEP 21)	22. <u>WORK ORDER CLERK:</u> CHECKS THE REQUEST FOR ADMINISTRATIVE ACCURACY/COMPLETENESS. PREPARES WORKING FOLDER, AND PLACES COPY 3 OF 4283 IN SUSPENSE FILE AND SENDS COPY 4 TO AUTOMATED SYSTEMS.	CHIEF, WORK COORDINATION (STEP 23)
WORK ORDER CLERK (STEP 22)	23. <u>CHIEF, WORK COORDINATION:</u> IF THE SITUATION WARRANTS, JUSTIFIES TO THE RPM CONVERSION OF THE JOR TO AN SO. -OR- CONTINUES PROCESSING THE 4283.	RPM (STEP 24) CHIEF, WORK COORDINATION (STEP 25)
CHIEF, WORK COORDINATION (STEP 23)	24. <u>RPM:</u> CONCURS IN RECOMMENDATION TO CONVERT JOR INTO A SO. -OR- DECIDES THAT WORK MUST BE ACCOMPLISHED AS A JOR.	SO CLERK (STEP 3) CHIEF, WORK COORDINATION (STEP 31)
CHIEF, WORK COORDINATION	25. <u>CHIEF, WORK COORDINATION:</u> DETERMINES THAT THE 4283 REQUIRES A TECHNICAL REVIEW. -OR- CONTINUES PROCESSING THE 4283.	CHIEF, O&M (STEP 26) CHIEF, WORK COORDINATION (STEP 31)

<u>ARRIVES FROM</u>	<u>STEP NUMBER & DESCRIPTION</u>	<u>GOES TO</u>
CHIEF, WORK COORDINATION	26. CHIEF, O&M: DETERMINES THAT CHIEF, B&G/UTILITIES MUST REVIEW 4283.	CHIEF, B&G/ UTILITIES (STEP 27)
	-OR-	
	REVIEWS 4283 FOR TECHNICAL FEASIBILITY, INDICATING WHETHER JOR SHOULD BE ACCOM- PLISHED. NOTES APPROPRIATE METHOD OF ACCOMPLISHMENT - IN-HOUSE, MINOR CONTRACT, OR MAJOR CONTRACT.	CHIEF, O&M (STEP 28)
CHIEF, O&M (STEP 26)	27. CHIEF, B&G/UTILITIES: REVIEWS 4283 FOR TECHNICAL FEASIBILITY, INDICATING WHETHER JOR SHOULD BE ACCOMPLISHED. NOTES MOST APPROPRIATE METHOD OF ACCOMPLISHMENT - EITHER IN-HOUSE, UNDER \$10,000 (MINOR) CONTRACT, OR OVER \$10,000 (MAJOR) CONTRACT.	CHIEF, O&M (STEP 28)
CHIEF, O&M (STEP 26)	28. CHIEF, O&M: DECIDES THAT TECHNICAL REVIEW WARRANTS DISAPPROVAL OF 4283. ANNOTATES 4283 AND FORWARDS TO WORK ORDER CLERK.	WORK ORDER CLERK (STEP 29)
	-OR-	
	RECOMMENDS APPROVAL OF JOR.	CHIEF, WORK COORDINATION (STEP 31)
CHIEF, O&M (STEP 28)	29. WORK ORDER CLERK: PREPARES XFD TRANSACTION ON EA, CA FORM 2 INDICATING DATE JOR RETURNED TO RPMM.	RPMM (STEP 30)

<u>ARRIVES FROM</u>	<u>STEP NUMBER & DESCRIPTION</u>	<u>GOES TO</u>
WORK ORDER CLERK (STEP 29)	30. <u>RPM:</u> REVIEWS AND ACCEPTS RECOMMENDATION TO DISAPPROVE THE 4283. SIGNS DISAPPROVAL.	WORK ORDER CLERK (STEP X)

-OR-

REJECTS RECOMMENDATION TO DISAPPROVE WORK AND FORWARDS FOR WORK ACCOMPLISHMENT, ANNOTATING THE REASON FOR THIS DECISION ON THE 4283.	CHIEF, WORK COORDINATION (STEP 31)
--	--

RPM (STEP 24)	31. <u>CHIEF, WORK COORDINATION:</u> NOTES ON THE JOB FOLDER WHERE TO SEND THE PROJECT - TO PLANS AND PROGRAMS IF JOB IS TO BE ACCOMPLISHED ON A CONTRACT OVER \$10,000; OR TO PLANNER/ESTIMATORS.	WORK ORDER CLERK (STEP 32)
---------------	--	-------------------------------

CHIEF, O&M
(STEP 28)

RPM (STEP 30)

CHIEF, WORK COORDINATION (STEP 31)	32. <u>WORK ORDER CLERK:</u> PULLS COPY 3 OF 4283 FROM SUSPENSE FILE AND PREPARES MASTER FOLDER. PREPARES XFC TRANSACTION WITH DATE TO ESTIMATOR AND SENDS TO AUTOMATED SYSTEMS.	PLANNER/ESTIMATOR (STEP 33)
--	--	--------------------------------

-OR-

PULLS COPY 3 FROM SUSPENSE, PREPARES MASTER FOLDER, AND PREPARES XFC TRANSACTION WITH A DATE TO DESIGN. ANNOTATES REMARKS FIELD OF XFD WITH "TO EPP", FORWARDING BOTH TRANSACTIONS TO AUTOMATED SYSTEMS.	PROGRAMS (STEP 80)
--	-----------------------

<u>ARRIVES FROM</u>	<u>STEP NUMBER & DESCRIPTION</u>	<u>GOES TO</u>
WORK ORDER CLERK (STEP 32)	33. <u>PLANNER/ESTIMATOR:</u> PREPARES THE PROGRAM ESTIMATE AND INDICATES THE APPROPRIATE APPROVAL AUTHORITY.	WORK ORDER CLERK (STEP 34)
PLANNER/ESTIMATOR (STEP 33)	34. <u>WORK ORDER CLERK:</u> PULLS COPY 3 OF WORK REQUEST FROM SUSPENSE FILE AND ANNOTATES PROGRAM ESTIMATE AND APPROVAL AUTHORITY ON IT. FILES ANOTATED COPY 3 OF THE WORK REQUEST IN THE MASTER FOLDER.	WORK ORDER CLERK (STEP 35)
WORK ORDER CLERK (STEP 34)	35. <u>WORK ORDER CLERK:</u> DETERMINES THAT REQUESTED WORK CAN BE CHARGED TO AN EXISTING 2544 REIMBURSABLE ORDER OR IT IS A STAFF ENGINEER RESPONSIBILITY TO FUND THE REQUESTED WORK.	WORK ORDER CLERK (STEP 40)
	-OR-	
	DETERMINES THAT REQUESTED WORK REQUIRES THE PREPARATION OF A NEW 2544 REIMBURSABLE ORDER BY A CUSTOMER OTHER THAN THE STAFF ENGINEER.	WORK ORDER CLERK (STEP 36)
WORK ORDER CLERK (STEP 35)	36. <u>WORK ORDER CLERK:</u> PREPARES AND FORWARDS A REQUEST FOR FUNDS TO THE APPROPRIATE REQUESTING ACTIVITY. PLACES THE WORKING FOLDER IN A SUSPENSE FILE FOR 30 DAYS. PREPARES AN XFD TRANSACTION WITH APPROPRIATE ENTRY IN REMARKS SECTION AND FORWARDS TO AUTOMATED SYSTEMS.	WORK ORDER CLERK (STEP 37)
	-OR-	
	IF FUNDING DOCUMENT IS RECEIVED WITHIN 30 DAYS FROM FINANCIAL MANAGEMENT (STEP 39) CONTINUE PROCESSING WORK REQUEST.	WORK ORDER CLERK (STEP 40)

<u>ARRIVES FROM</u>	<u>STEP NUMBER & DESCRIPTION</u>	<u>GOES TO</u>
WORK ORDER CLERK (STEP 36)	37. <u>WORK ORDER CLERK:</u> DETERMINES THAT FUNDING DOCUMENT HAS NOT BEEN RECEIVED WITHIN THE FIRST 30 DAY SUSPENSE PERIOD. FORWARDS SECOND REQUEST FOR FUNDS TO THE REQUESTING ACTIVITY. PREPARES A XFD TRANSACTION WITH APPROPRIATE ENTRY IN REMARKS SECTION AND FORWARDS TO AUTOMATED SYSTEMS. IF FUNDING DOCUMENT IS RECEIVED WITHIN THE SECOND 30 DAY SUSPENSE PERIOD FROM FINANCIAL MANAGEMENT (STEP 39) CONTINUE PROCESSING WORK REQUEST.	WORK ORDER CLERK (STEP 40)
	-OR-	
	IF FUNDING DOCUMENT IS NOT RECEIVED WITHIN THE SECOND 30 DAY SUSPENSE PERIOD INITIATES PROCEDURES REQUIRED TO PROCESS A DISAPPROVAL ACTION ON THE WORK REQUEST.	WORK ORDER CLERK (STEP X)
WORK ORDER CLERK (STEPS 36, 37)	39. <u>REQUESTER:</u> DECIDES TO FUND REQUESTED WORK. PREPARES FUNDING DOCUMENT (2544) AND FORWARDS IT TO THE FINANCIAL MANAGEMENT BRANCHII.	FINANCIAL MANAGEMENT (STEP 39)
	-OR-	
	DECIDES NOT TO FUND REQUESTED WORK. DOES NOT PREPARE AND FORWARD FUNDING DOCUMENT. THE WORK ORDER CLERK WILL INSTITUTE CANCELLATION PROCEDURES WHEN FUNDING DOCUMENT IS NOT RECEIVED WITHIN 60 DAYS.	CANCEL
REQUESTER	39. <u>FINANCIAL MANAGEMENT:</u> ASSIGNS 4 DIGIT 2544 NUMBER AND REIMBURSABLE CODE TO FUNDING DOCUMENT. FORWARDS 2 COPIES OF THE ANNOTATED FUNDING DOCUMENT TO THE WORK ORDER CLERK.	WORK ORDER CLERK (STEP 40)

<u>ARRIVES FROM</u>	<u>STEP NUMBER & DESCRIPTION</u>	<u>GOES TO</u>
WORK ORDER CLERK (STEPS 35, 36, 37) FINANCIAL MANAGEMENT (STEP 39)	40. WORK ORDER CLERK: REMOVES WORKING FOLDER FROM SUSPENSE FILE AND PLACES ONE COPY OF THE FUNDING DOCUMENT (2544) IN THE FOLDER. FILES THE OTHER COPY OF THE 2544 IN THE MASTER FOLDER IN THE ACTIVE FILE.	WORK ORDER CLERK (STEP 41)
WORK ORDER CLERK (STEP 40)	41. WORK ORDER CLERK: DETERMINES THAT APPROVAL SIGNATURE IS REQUIRED AND/OR A FUNDING DOCUMENT (2544) IS REQUIRED FROM THE STAFF ENGINEER. PREPARES XFD TRANSACTION WITH APPROPRIATE ENTRY IN REMARKS SECTION AND FORWARD TO AUTOMATED SYSTEMS.	APPROVING ENGINEER (STEP 42)
	-OR-	
WORK ORDER CLERK (STEP 41)	42. APPROVING ENGINEER: DECIDES TO APPROVE THE WORK REQUEST (4283) AND/OR TO FUND REQUESTED WORK.	WORK ORDER CLERK (STEP 45) A. PROVING ENGINEER (STEP 43)
	-OR-	
APPROVING ENGINEER (STEP 42)	43. APPROVING ENGINEER: ENTERS APPROVAL SIGNATURE AND DATE ON 4283 AND/OR PREPARES FUNDING DOCUMENT (2544).	WORK ORDER CLERK (STEP X) FINANCIAL MANAGEMENT (STEP 44)

<u>ARRIVES FROM</u>	<u>STEP NUMBER & DESCRIPTION</u>	<u>GOES TO</u>
APPROVING ENGINEER (STEP 43)	44. <u>FINANCIAL MANAGEMENT:</u> IF A NEW 2544 IS INCLUDED IN THE PACKAGE FROM THE APPROVING ENGINEER, ASSIGNS 4 DIGIT 2544 NUMBER AND REIMBURSABLE CODE TO THIS FUNDING DOCUMENT. MAKES 2 COPIES OF THE ANNOTATED 2544 AND FORWARDS PACKAGE TO WORK ORDER CLERK. IF NO NEW 2544 IS INCLUDED IN THE PACKAGE FORWARD TO THE WORK ORDER CLERK WITH A COPY OF AN ALREADY EXISTING 2544 DOCUMENT ATTACHED.	WORK ORDER CLERK (STEP 45)
FINANCIAL MANAGEMENT (STEP 44)	45. <u>WORK ORDER CLERK:</u> FILES COPY OF THE APPROVED WORK REQUEST AND A COPY OF THE 2544 IN THE MASTER FOLDER. FILES COPY 2 OF THE WORK REQUEST AND THE OTHER COPY OF THE 2544 IN THE WORKING FOLDER. PREPARES XFC AND XFD TRANSACTIONS WITH ALL REQUIRED ENTRIES AND FORWARDS THEM TO AUTOMATED SYSTEMS.	PLANNER/ESTIMATOR (STEP 46)
WORK ORDER CLERK (STEP 45)	46. <u>PLANNER/ESTIMATOR:</u> PREPARES COMPLETE ESTIMATE PACKAGE INCLUDING THE FOLLOWING DOCUMENTS, AS REQUIRED, BASED UPON IN-HOUSE OR SMALL SERVICE CONTRACT PERFORMANCE; DRAWINGS, SKETCHES, BILL OF MATERIALS, 4284, 4286, 3953, AND/OR ANY OTHER REQUIRED DOCUMENTATION. MAKES COPIES OF DOCUMENTS AND PLACES THEM IN WORKING FOLDER FOR RETENTION. PREPARES FH1, FJ1, XFD, XFE AND XFF TRANSACTIONS WITH ALL REQUIRED ENTRIES AND FORWARDS THEM TO AUTOMATED SYSTEMS.	PLANNER/ESTIMATOR (STEP 47)

<u>ARRIVES FROM</u>	<u>STEP NUMBER & DESCRIPTION</u>	<u>GOES TO</u>
PLANNER/ESTIMATOR (STEP 46)	47. <u>PLANNER/ESTIMATOR:</u> DETERMINES THAT THE COMPLETED ESTIMATE PACKAGE WAS DEVELOPED BASED ON PERFORMANCE OF REQUIRED WORK BY THE IN-HOUSE WORK FORCE.	CHIEF, WORK COORDINATION (STEP 48)
-OR-		
	DETERMINES THAT THE COMPLETED ESTIMATE PACKAGE WAS DEVELOPED BASED ON PERFORMANCE OF REQUIRED WORK BY A SMALL SERVICE CONTRACTOR.	FINANCIAL MANAGEMENT (STEP 64)
PLANNER/ESTIMATOR (STEP 47)	48. <u>CHIEF, WORK COORDINATION:</u> REVIEWS JOB PLANS AND ESTIMATE TO DETERMINE ADEQUACY, PROPER WORK CLASSIFICATION, PROPER METHOD OF ACCOMPLISHMENT, COMPLETENESS AND LEGIBILITY OF ALL DOCUMENTS, CORRECT FUNDING CODES, ETC. RETURNS FOLDER TO ORIGINATOR FOR CORRECTION OF ANY DEFICIENCIES.	WORK ORDER CLERK (STEP 49)
CHIEF, WORK COORDINATION (STEP 48)	49. <u>WORK ORDER CLERK:</u> DUPLICATES DOCUMENTS AS REQUIRED AND MAKES DISTRIBUTION AS FOLLOWS: EACH SHOP INVOLVED IN THE WORK DA FORM 4283 PLANS AND SKETCHES APPLICABLE JOB PHASE CALCULATION SHEETS SCHEDULER DA FORM 4284 PLANS AND SKETCHES MASTER FILE ORIGINAL DA FORM 4284 ORIGINAL PLANS AND SKETCHES PREPARES XFD, XFE, AND XFF TRANSACTIONS AS REQUIRED AND FORWARDS THEM TO AUTOMATED SYSTEMS.	MATERIAL COORDINATOR (STEP 50)

ARRIVES FROM

STEP NUMBER & DESCRIPTION

GOES TO

WORK ORDER CLERK
(STEP 49)

50. MATERIAL COORDINATOR: REVIEWS BILLS OF MATERIALS
FOR ADEQUACY AND ACCURACY.

STORAGE BRANCH
(STEP 51)

MATERIAL
COORDINATOR
(STEP 50)

51. STORAGE BRANCH: DETERMINES THAT MATERIALS REQUESTED
BY THE MATERIAL COORDINATOR TO COMPLETE THE
IJO ARE AVAILABLE IN THE WAREHOUSE STOCK.

STORAGE BRANCH
(STEP 58)

-OR-

DETERMINES THAT MATERIALS REQUESTED BY THE
MATERIAL COORDINATOR TO COMPLETE THE IJO ARE
NOT AVAILABLE IN WAREHOUSE STOCK AND MUST BE
PROCURED.

PROPERTY CONTROL
BRANCH
(STEP 52)

STORAGE BRANCH
(STEP 51)

52. PROPERTY CONTROL BRANCH: DETERMINES THAT REQUESTED
MATERIALS HAVE A NATIONAL STOCK NUMBER AND ARE
TO BE ORDERED THROUGH NICP.

PROPERTY CONTROL
BRANCH
(STEP 56)

-OR-

DETERMINES THAT REQUESTED MATERIALS DO NOT HAVE
A NATIONAL STOCK NUMBER AND ARE TO BE ORDERED
THROUGH EITHER A BPA OR DCSAQ PROCEDURES.

PROPERTY CONTROL
BRANCH
(STEP 53)

PROPERTY CONTROL
BRANCH
(STEP 52)

53. PROPERTY CONTROL BRANCH: DETERMINES THAT REQUESTED
MATERIALS COST \$500 OR LESS AND A BPA EXISTS.

PROPERTY CONTROL
BRANCH
(STEP 54)

-OR-

DETERMINES THAT REQUESTED MATERIALS COST MORE THAN
\$500 AND/OR A BPA DOES NOT EXIST.

PROPERTY CONTROL
BRANCH
(STEP 55)

ARRIVES FROM STEP NUMBER & DESCRIPTION

GOES TO

PROPERTY CONTROL
BRANCH
(STEP 53)

54. PROPERTY CONTROL BRANCH: ORDERS REQUESTED MATERIALS
COSTING \$500 OR LESS UTILIZING EXISTING BPA LOCAL
PROCUREMENT PROCEDURES.

PROPERTY CONTROL
BRANCH
(STEP 57)

PROPERTY CONTROL
BRANCH
(STEP 53)

55. PROPERTY CONTROL BRANCH: ORDERS REQUESTED MATERIALS
COSTING MORE THAN \$500, OR FOR WHICH NO BPA EXISTS,
UTILIZING DCSAQ PROCEDURES.

PROPERTY CONTROL
BRANCH
(STEP 57)

PROPERTY CONTROL
BRANCH
(STEP 52)

56. PROPERTY CONTROL BRANCH: ORDERS REQUESTS MATERIALS
THAT HAVE A NATIONAL STOCK NUMBER UTILIZING NICP
PROCEDURES.

PROPERTY CONTROL
BRANCH
(STEP 57)

PROPERTY CONTROL
BRANCH
(STEPS 54,55,56)

57. PROPERTY CONTROL BRANCH: RECEIVES ISSUE AND RECEIPT
DOCUMENTS FROM STORAGE BRANCH. PREPARES REQUIRED
IFS INPUT DATA DOCUMENTS (2M1) AND FORWARDS TO
AUTOMATED SYSTEMS.

STORAGE BRANCH
(STEP 58)

STORAGE BRANCH
(STEP 51,57)

58. STORAGE BRANCH: PROVIDES MATERIALS REQUESTED TO
TO COMPLETE THE IJO TO THE MATERIAL COORDINATOR
FOR STAGING. MATERIALS ARE EITHER ISSUED FROM
WAREHOUSE STOCK OR FROM RECEIPT OF PROCURED
MATERIALS.

MATERIAL
COORDINATOR
(STEP 59)

-AND-

PROVIDES WAREHOUSE STOCK ISSUE DOCUMENTS AND
VENDOR RECEIPT DOCUMENTS TO PROPERTY CONTROL
BRANCH FOR ENTRY INTO IFS. (STEP 57)

<u>ARRIVES FROM</u>	<u>STEP NUMBER & DESCRIPTION</u>	<u>GOES TO</u>
STORAGE BRANCH (STEP 58)	59. <u>MATERIAL COORDINATOR:</u> RECEIVES MATERIALS FOR IJO FROM STORAGE BRANCH AND ASSEMBLES THEM BY IJO DOCUMENT NUMBER IN HOLDING AREA. WHEN ALL MATERIALS REQUIRED OR AN IJO HAVE BEEN RECEIVED, INFORMS THE SCHEDULER OF THIS FACT. PREPARES XFD TRANSACTION ENTERING THE "TO SCHEDULER" DATE AND FORWARDS TO AUTOMATED SYSTEMS.	SCHEDULER (STEP 60)
MATERIAL COORDINATOR (STEP 59)	60. <u>SCHEDULER:</u> COORDINATES WITH OPERATIONAL MANAGERS AND SCHEDULES JOB INTO THE SHOP. FORWARDS THE FILE PREPARED BY THE WORK ORDER CLERK. ENTERS "TO SHOP" DATE ON ORIGINAL 4284. PREPARES XFD TRANSACTION ENTERING THE "TO SHOP" DATE AND FORWARDS TO AUTOMATED SYSTEMS.	SHOPS (STEP 61)
SCHEDULER (STEP 60)	61. <u>SHOPS:</u> ACCOMPLISHES REQUESTED IJO WORK IN ACCORDANCE WITH DA FORM 4284, PLANS, DRAWINGS, AND SKETCHES PROVIDED. PREPARES REQUIRED L&E CARD ENTRIES (FM1 TRANSACTION) TO REPORT WORK DONE ON THE IJO AND FORWARDS L&E CARDS TO THE FINANCIAL MANAGEMENT BRANCH.	SCHEDULER (STEP 60)
SHOPS (STEP 61)	62. <u>SCHEDULER:</u> DETERMINES THAT IJO HAS NOT BEEN COMPLETED -OR- DETERMINES THAT IJO HAS BEEN COMPLETED.	SCHEDULER (STEP 63) SCHEDULER (STEP 63)

<u>ARRIVES FROM</u>	<u>STEP NUMBER & DESCRIPTION</u>	<u>GOES TO</u>
SCHEDULER (STEP 62)	63. <u>SCHEDULER</u> : RECORDS IJO COMPLETION DATE ON THE ORIGINAL 4284. RECORDS ALL JOB COSTS IN FOLDER. PLACES A COPY OF THE SPECIAL PROJECTS REPORTING SHOWING FINAL COSTS AND COMPLETION DATE IN THE WORKING FOLDER. PREPARES XFD TRANSACTION ENTERING A "C" IN THE COMPLETION COLUMN AND FORWARDS TO AUTOMATED SYSTEMS.	CHIEF, WORK RECEPTION (STEP 75)
PLANNER/ESTIMATOR (STEP 47)	64. <u>FINANCIAL MANAGEMENT</u> : CERTIFIES AVAILABILITY OF FUNDS ON DA FORM 3953.	FINANCIAL MANAGEMENT (STEP 65)
FINANCIAL MANAGEMENT (STEP 64)	65. <u>FINANCIAL MANAGEMENT</u> : DETERMINES THAT THE 3953 REQUIRES APPROVAL SIGNATURE OF THE RPM.	RPM (STEP 66)
	-OR-	
	DETERMINES THAT THE 3953 REQUIRES APPROVAL SIGNATURE OF THE COMMANDER/DIRECTOR, EA, CA.	C/D, EA, CA (STEP 67)
FINANCIAL MANAGEMENT (STEP 65)	66. <u>RPM</u> : ENTERS APPROVAL SIGNATURE AND DATE ON THE DA FORM 3953.	FINANCIAL MANAGEMENT (STEP 68)
FINANCIAL MANAGEMENT (STEP 65)	67. <u>COMMANDER/DIRECTOR, EA, CA</u> : ENTERS APPROVAL SIGNATURE AND DATE ON THE DA FORM 3953.	FINANCIAL MANAGEMENT (STEP 68)

<u>ARRIVES FROM</u>	<u>STEP NUMBER & DESCRIPTION</u>	<u>GOES TO</u>
RPMH (STEP 66) C/D, EA, CA (STEP 67)	68. <u>FINANCIAL MANAGEMENT:</u> MAKES COPY OF THE APPROVED 3953 AND FORWARDS TO PLANNER/ESTIMATOR (STEP 69).	FINANCIAL MANAGEMENT (STEP 70)
FINANCIAL MANAGEMENT (STEP 68)	69. <u>PLANNER/ESTIMATOR:</u> FILES COPY OF APPROVED 3953 IN WORKING FOLDER.	FILE
FINANCIAL MANAGEMENT (STEP 68)	70. <u>FINANCIAL MANAGEMENT:</u> SENDS ORIGINAL AND 2 COPIES OF THE 3953 PLUS COPIES OF ALL OTHER REQUIRED SUPPORTING DOCUMENTS TO THE BALTIMORE PROCUREMENT ANNEX OR TO BALTIMORE DISTRICT PROCUREMENT AS APPROPRIATE.	FINANCIAL MANAGEMENT (STEP 71)
FINANCIAL MANAGEMENT (STEP 70)	71. <u>FINANCIAL MANAGEMENT:</u> RECEIVES 4 COPIES OF DD FORM 1155 OR SF 19 FROM THE BALTIMORE PROCUREMENT ANNEX OR BALTIMORE DISTRICT PROCUREMENT. FORWARDS COPY OF 1155 OR SF 19 TO PLANNER/ESTIMATOR. PREPARES FK1 TRANSACTION WITH ALL REQUIRED ENTRIES AND FORWARDS TO AUTOMATED SYSTEMS.	PLANNER/ESTIMATOR (STEP 72)
FINANCIAL MANAGEMENT (STEP 71)	72. <u>PLANNER/ESTIMATOR:</u> INSPECTS CONTRACT WORK TO ENSURE COMPLIANCE WITH SPECIFICATIONS. PREPARES DD FORM 250 (PARTIAL PAYMENT) AND FORWARDS 2 COPIES TO FINANCIAL MANAGEMENT. PREPARES FJ1 TRANSACTION TO RECORD ACTUAL COST AND FORWARDS TO FINANCIAL MANAGEMENT FOR CERTIFICATION. PREPARES L&E CARD (FM1 TRANSACTION) TO RECORD CONTRACT INSPECTION TIME AND FORWARDS TO FINANCIAL MANAGEMENT. ENSURE ALL INTERESTED PARTIES INSPECT THE WORK BEFORE FINAL CONTRACT PAYMENT DOCUMENTS ARE PREPARED.	PLANNER/ESTIMATOR (STEP 74)

<u>ARRIVES FROM</u>	<u>STEP NUMBER & DESCRIPTION</u>	<u>GOES TO</u>
PLANNER/ESTIMATOR (STEP 72)	73. <u>FINANCIAL MANAGEMENT:</u> FORWARDS 2 COPIES OF THE 250 OR 1150 TO THE BALTIMORE PROCUREMENT ANNEX OR BALTIMORE DISTRICT PROCUREMENT, AS APPROPRIATE FOR PAYMENT. CERTIFIES FJ1 TRANSACTION AND PREPARES FK1 TRANSACTION WITH ALL REQUIRED ENTRIES AND FORWARDS THEM TO AUTOMATED SYSTEMS.	FILE
PLANNER/ESTIMATOR (STEP 72)	74. <u>PLANNER/ESTIMATOR:</u> DETERMINES THAT COMPLETED CONTRACT WORK ALSO INCLUDED IN-HOUSE WORK FORCE PHASES.	CHIEF, WORK RECEPTION (STEP 75)
	-OR-	
	DETERMINES THAT COMPLETED CONTRACT WORK DID NOT INCLUDE IN-HOUSE WORK FORCE PHASES.	PLANNER/ESTIMATOR (STEP 76)
PLANNER/ESTIMATOR (STEP 74) SCHEDULER (STEP 63)	75. <u>CHIEF, WORK RECEPTION:</u> ANNOTATES THE FOLDER IF THE COMPLETED WORK PROJECT REQUIRES DOCUMENTATION IN THE REAL PROPERTY RECORDS.	WORK ORDER CLERK (STEP 77)
PLANNER/ESTIMATOR (STEP 74)	76. <u>PLANNER/ESTIMATOR:</u> REVIEWS FINAL SPECIAL PROJECTS COST REPORT AND ANNOTATES WITH SIGNATURE AND DATE. PLACES ANNOTATED COPY OF REPORT IN THE PROJECT FOLDER.	WORK ORDER CLERK (DATE 77)

<u>ARRIVES FROM</u>	<u>STEP NUMBER & DESCRIPTION</u>	<u>GOES TO</u>
CHIEF, WORK RECEPTION (STEP 75) PLANNER/ESTIMATOR (STEP 76)	77. <u>WORK ORDER CLERK:</u> CLOSES OUT PROJECT. THE WORKING FOLDER REPLACES THE MASTER FOLDER AND SHOULD CONTAIN THE FOLLOWING: ORIGINAL COPY OF WORK REQUEST (DA FORM 4283) WITH APPROVAL SIGNATURE; ORIGINAL WORK ORDER (DA FORM 4284); COPY OF THE SPECIAL PROJECTS REPORT WITH FINAL COSTS AND COMPLETION DATE SHOWN; ORIGINAL OF ALL JOB PHASE CALCULATION SHEETS; ORIGINAL OF ALL PLANS AND SKETCHES; COPIES OF ALL BILL OF MATERIALS (DA FORM 2702); AND ANY OTHER DOCUMENTATION PERTINENT TO THE JOB. DESTROYS ALL OTHER DOCUMENTATION AND FILES THE COMPLETED PROJECT FOLDER IN THE INACTIVE FILE.	WORK ORDER CLERK (STEP 78)

WORK ORDER CLERK (STEP 77)	78. <u>WORK ORDER CLERK:</u> DETERMINES THAT CHIEF, WORK RECEPTION HAS INDICATED ON THE FOLDER THAT THE COMPLETED PROJECT REQUIRES DOCUMENTATION IN THE REAL PROPERTY RECORDS. FORWARDS TO THE REAL PROPERTY SECTION A COPY OF THE 4283, 4284, AND SPECIAL PROJECTS REPORT.	REAL PROPERTY (STEP 79)
-------------------------------	---	----------------------------

-OR-

DETERMINES THAT ABOVE ACTION IS NOT REQUIRED. COMPLETE

WORK ORDER CLERK (STEP 78)	79. <u>REAL PROPERTY:</u> UTILIZES DATA CONTAINED ON THE 4283, 4284, AND THE SPECIAL PROJECTS REPORT TO UPDATE REAL PROPERTY RECORDS AND THE IFS ASSETS DATA BASE AS REQUIRED.	COMPLETE
-------------------------------	--	----------

<u>ARRIVES FROM</u>	<u>STEP NUMBER & DESCRIPTION</u>	<u>GOES TO</u>
WORK ORDER CLERK (STEP 32)	80. <u>PROGRAMS:</u> DETERMINES THAT THE 4283 IS STAFF ENGINEER FUNDED.	PROGRAMS (STEP 85)
	-OR-	
	PREPARES A DF REQUESTING FUNDS FROM ANOTHER REIMBURSABLE CUSTOMER.	PROGRAMS (STEP 81)
PROGRAMS (STEP 80)	81. <u>PROGRAMS:</u> PREPARES AND FORWARDS A REQUEST FOR FUNDS TO THE APPROPRIATE REQUESTING ACTIVITY. PLACES THE WORKING FOLDER IN A SUSPENSE FILE FOR 30 DAYS. PREPARES AN XFD TRANSACTION WITH APPROPRIATE ENTRY IN REMARKS FIELD AND FORWARDS TO AUTOMATED SYSTEMS.	
	-AND-	
	IF THE FUNDING DOCUMENT (2544) IS RECEIVED WITHIN 30 DAYS BY FINANCIAL MANAGEMENT, REMOVES FOLDER FROM SUSPENSE.	PROGRAMS (STEP 85)
	-OR-	
	CONTINUES HOLDING THE WORKING FOLDER IN THE SUSPENSE FILE.	PROGRAMS (STEP 82)

<u>ARRIVES FROM</u>	<u>STEP NUMBER & DESCRIPTION</u>	<u>GOES TO</u>
PROGRAMS (STEP 81)	82. <u>PROGRAMS:</u> FORWARDS A SECOND REQUEST FOR FUNDS TO THE REQUESTING ACTIVITY. PLACES THE WORKING FOLDER IN A SECOND 30 DAY SUSPENSE FILE. PREPARES AN XFD TRANSACTION WITH APPROPRIATE ENTRY IN THE REMARKS FIELD AND FORWARDS TO AUTOMATED SYSTEMS.	
	-AND-	PROGRAMS (STEP 85)
	IF THE FUNDING DOCUMENT (2544) IS RECEIVED WITHIN THE SECOND 30 DAYS BY FINANCIAL MANAGEMENT, REMOVES FOLDER FROM SUSPENSE.	
	-OR-	
	NO FUNDING DOCUMENT BEING RECEIVED, THE 4283 IS PROCESSED AS A DISAPPROVAL.	WORK ORDER CLERK (STEP X)
PROGRAMS (STEPS 81,82)	83. <u>REQUESTER:</u> DECIDES TO FUND REQUESTED WORK. PREPARES FUNDING DOCUMENT (2544) AND FORWARDS TO FINANCIAL MANAGEMENT.	FINANCIAL MANAGEMENT (STEP 84)
	-OR-	
	DECIDES NOT TO FUND REQUESTED WORK. DOES NOT PREPARE AND FORWARD FUNDING DOCUMENT. THE WORK ORDER CLERK WILL INSTITUTE CANCELLATION PROCEDURES WHEN THE FUNDING DOCUMENT IS NOT RECEIVED WITHIN 60 DAYS.	CANCEL
REQUESTER (STEP 83)	84. <u>FINANCIAL MANAGEMENT:</u> ASSIGNS A 4 DIGIT 2544 NUMBER AND REIMBURSABLE CODE TO THE FUNDING DOCUMENT. FORWARDS 2 COPIES OF THE ANNOTATED FUNDING DOCUMENT TO PROGRAMS.	PROGRAMS (STEP 85)

ARRIVES FROM

PROGRAMS
(STEPS 80, 81, 82)

STEP NUMBER & DESCRIPTION

85. PROGRAMS: FILES COPIES OF THE 2544 IN THE WORKING FOLDER.

GOES TO

-AND-

IF THE COST OF THE CONTRACT IS ESTIMATED TO BE UNDER \$500,000 FOR MAINTENANCE AND REPAIR, K WORK, OR UNDER \$100,000 FOR NEW WORK, L WORK, PREPARES 4283 FOR APPROVING ENGINEER'S SIGNATURE.

APPROVING
ENGINEER
(STEP 86)

-OR-

IF THE ESTIMATED COST EXCEEDS \$500,000 FOR K WORK OR \$100,000 FOR L WORK, PREPARES DOCUMENTS FOR INSTALLATION PLANNING BOARD.

POST COMMANDER
(STEP 91)

PROGRAMS
(STEP 85)

86. APPROVING ENGINEER: DECIDES THAT 4283 WILL BE DONE, USING THE ANNUAL WORK PLAN AS A REFERENCE.

APPROVING
ENGINEER
(STEP 87)

-OR-

DECIDES THAT WORK WILL NOT BE ACCOMPLISHED

WORK ORDER CLERK
(STEP X)

APPROVING
ENGINEER
(STEP 86)

87. APPROVING ENGINEER: SIGNS 4283 IN THE APPROVAL BLOCK AND DATES THE XFC TRANSACTION. IF JOB COSTS ARE NOT TO BE CHARGED TO AN EXISTING 2544, SIGNS NEW 2544 DOCUMENT TRANSFERRING FUNDS TO EA, CA.

FINANCIAL
MANAGEMENT
(STEP 88)

APPROVING
ENGINEER
(STEP 87)

88. FINANCIAL MANAGEMENT: ASSIGNS A 4 DIGIT 2544 NUMBER AND REIMBURSABLE CODE TO THE FUNDING DOCUMENT, IF A NEW 2544 IS ATTACHED.

PROGRAMS
(STEP 89)

ARRIVES FROM STEP NUMBER & DESCRIPTION

GOES TO

FINANCIAL
MANAGEMENT
(STEP 88)

89. PROGRAMS: RECEIVES WORKING FOLDER WITH OBLIGATED
FUNDS FROM FINANCIAL MANAGEMENT. PREPARES
DOCUMENTS FOR INSTALLATION PLANNING BOARD.

PROGRAMS
(STEP 90)

PROGRAMS
(STEP 89)

90. PROGRAMS: DETERMINES THAT 4283 IS AN EMERGENCY. SKIPS
SEMI-ANNUAL IPB CYCLE.

PROGRAMS
(STEP 93)

-OR-

IF TIME FOR IPB MEETING, SENDS COPIES OF ALL 4283S
AWAITING ASSIGNMENT OR REASSIGNMENT OF A PRIORITY
TO IPB PARTICIPANTS.

POST COMMANDER
(STEP 91)

PROGRAMS
(STEPS 85,90)

91. POST COMMANDER: CONVENES INSTALLATION PLANNING BOARD.
BOARD ASSIGNS PRIORITIES FOR ALL PROJECTS AND
SETS FUNDING LINE FOR FINANCED PROJECTS (BASED
ON THE UNCONSTRAINED RESOURCE REQUIREMENTS)

PROGRAMS
(STEP 92)

POST COMMANDER
(STEP 91)

92. PROGRAMS: DETERMINES THAT WORK WAS DISAPPROVED BY THE
IPB. NOTES REASON FOR DISAPPROVAL IN THE REMARKS
FIELD OF THE 4283.

WORK ORDER CLERK
(STEP X)

-OR-

ENTERS THE IPB ASSIGNED PRIORITY ON THE XFD
TRANSACTION AND SENDS TRANSACTION TO AUTOMATED
SYSTEMS.

PROGRAMS
(STEP 93)

ARRIVES FROM

STEP NUMBER & DESCRIPTION

GOES TO

PROGRAMS
(STEPS 90,92)

93. PROGRAMS: DETERMINES IF PROJECT MUST BE APPROVED
AND/OR DESIGNED BY CORPS. PREPARES
FOR CORPS TO APPROVE K WORK GREATER THAN
\$500,000 OR L WORK GREATER THAN \$100,000, OR
FOR CORPS TO DESIGN ANY PROJECT.

C/D, EA, CA
(STEP 151)

-OR-

PREPARE XFD TRANSACTION WITH A DATE SENT TO
DESIGN.

PROGRAMS
(STEP 94)

PROGRAMS
(STEP 93)

94. PROGRAMS: DETERMINES IF PRIORITY IS GREATER THAN 100.
RECYCLES PROJECT TO NEXT IPB.

POST COMMANDER
(STEP 91)

-OR-

FORWARDS WORKING FOLDER FOR PROJECT DESIGN.

PLANS
(STEP 95)

PROGRAMS
(STEP 94)

95. PLANS: DECIDES IF AN ARCHITECTURAL ENGINEER FIRM
WILL DESIGN THE PROJECT.

PLANS (STEP 97)

-OR-

DECIDES THAT THE PROJECT DESIGN WILL BE ACCOM-
PLISHED IN-HOUSE.

PLANS (STEP 96)

<u>ARRIVES FROM</u>	<u>STEP NUMBER & DESCRIPTION</u>	<u>GOES TO</u>
PLANS (STEP 95)	96. <u>PLANS:</u> PREPARES ALL PHASING FOR DESIGN INCLUDING PHASES FOR IN-HOUSE DESIGN. COMPLETES 4285 (XFG, XFD, XFE, AND XFF TRANSACTIONS). IF NEEDED, PREPARES DF ADDRESSED TO REQUESTING AGENCY ASKING FOR ADDITIONAL FUNDS.	PLANS (STEP 99)
PLANS (STEP 95)	97. <u>PLANS:</u> PREPARES REQUEST FOR PROPOSAL FOR ARCHITECTURAL ENGINEERING FIRM (AE). COMPLETES 4285 (XFG, XFD, XFE, AND XFF TRANSACTIONS), A PR&C (3953), AND A STATEMENT OF WORK. FORWARDS THIS TO BALTIMORE PROCUREMENT AND CONTRACTING (P&C).	PLANS (STEP 98)
PLANS (STEP 97)	98. <u>PLANS:</u> RECEIVES PROPOSALS FROM AE FIRMS. EVALUATES AND NEGOTIATES DESIGN PROPOSALS AND CHOOSES AN AE FIRM. IF NEEDED, PREPARES DF TO CUSTOMER REQUESTING FUNDS. ALSO PREPARES PR&C FOR DESIGN WORK.	PLANS (STEP 99)
PLANS (STEPS 96,98)	99. <u>PLANS:</u> DETERMINES FUNDS OR ADDITIONAL FUNDS ARE NEEDED.	PLANS (STEP 100)
	-OR-	
	CONTINUES PROCESSING DESIGN PROJECT.	PLANS (STEP 104)

<u>ARRIVES FROM</u>	<u>STEP NUMBER & DESCRIPTION</u>	<u>GOES TO</u>
PLANS (STEP 99)	100. <u>PLANS:</u> DETERMINES THAT REQUESTED WORK IS THE STAFF ENGINEER'S RESPONSIBILITY TO FUND.	REQUESTER (STEP 101)
	-OR-	
	DETERMINES THAT REQUESTED WORK REQUIRES THE PREPARATION OF A NEW OR ADD ON 2544 REIMBURSABLE ORDER BY A CUSTOMER OTHER THAN THE STAFF ENGINEER.	APPROVING ENGINEER (STEP 102)
PLANS (STEP 100)	101. <u>REQUESTER:</u> DECIDES TO FUND REQUESTED WORK. PREPARES FUNDING DOCUMENT (2544) AND FORWARDS IT TO FINANCIAL MANAGEMENT.	FINANCIAL MANAGEMENT (STEP 103)
	-OR-	
	DECIDES NOT TO FUND REQUESTED WORK. DOES NOT PREPARE AND FORWARD FUNDING DOCUMENT.	CANCEL
PLANS (STEP 100)	102. <u>APPROVING ENGINEER:</u> DECIDES TO FUND REQUESTED WORK. SIGNS 2544.	FINANCIAL MANAGEMENT (STEP 103)
	-OR-	
	DECIDES TO RECYCLE THE 4283 INTO THE NEXT IPB.	POST COMMANDER (STEP 91)
REQUESTER (STEP 101) APPROVING ENGINEER (STEP 102)	103. <u>FINANCIAL MANAGEMENT:</u> ASSIGNS A 4 DIGIT 2544 NUMBER AND REIMBURSABLE CODE TO FUNDING DOCUMENT. FORWARDS TWO COPIES OF THE ANNOTATED FUNDING DOCUMENT TO PLANS.	PLANS (STEP 104)

<u>ARRIVES FROM</u>	<u>STEP NUMBER & DESCRIPTION</u>	<u>GOES TO</u>
PLANS (STEP 99) FINANCIAL MANAGEMENT (STEP 103)	104. <u>PLANS:</u> DETERMINES THAT THE PROJECT IS TO BE DESIGNED BY AN AE FIRM. FORWARDS PR&C (3953) FOR SIGNATURE ACCOMPANIED BY ONE COPY OF THE 2544.	C/D, EA, CA (STEP 105)
	-OR-	
	DETERMINES THAT THE PROJECT IS TO BE FUNDED. (IF CUSTOMER HAS NOT FORWARDED A 2544 PROJECT REMAINS IN SUSPENSE).	PLANS (STEP 115)
PLANS (STEP 104)	105. <u>C/D, EA, CA:</u> SIGNS PR&C FOR AE FIRM TO DESIGN PROJECT.	FINANCIAL MGMT (STEP 106)
C/D, EA, CA (STEP 105)	106. <u>FINANCIAL MANAGEMENT:</u> CERTIFIES FUNDS AND SIGNS PR&C.	PLANS (STEP 107)
FINANCIAL MANAGEMENT	107. <u>PLANS:</u> TRANSMITS AE PROPOSAL AND 3953 FOR DESIGN WORK TO PROCUREMENT AND CONTRACTING (P&C) IN BALTIMORE. P&C ISSUES DELIVERY ORDER, AND AE FIRM COMPLETES DESIGN.	PLANS (STEP 108)
PLANS (STEP 107)	108. <u>PLANS:</u> RECEIVES AND REVIEWS DESIGN FROM AE FIRM. COMPLETES 4286 AND DD 250 (OR 1155) FOR PAYMENT OF CONTRACTOR.	PLANS (STEP 109)

<u>ARRIVES FROM</u>	<u>STEP NUMBER & DESCRIPTION</u>	<u>GOES TO</u>
PLANS (STEP 108)	109. <u>PLANS:</u> SOLICITS INPUTS FROM CONCERNED GROUPS ON THE COMPLETENESS OF THE DESIGN PROPOSAL IN A PRE-CONSTRUCTION CONFERENCE. PARTICIPANTS MAY INCLUDE: CHIEF, O&M; REQUESTER; APPROVING ENGINEER; RPM; AND THE POST COMMANDER. ONCE THE DESIGN IS APPROVED, FORWARDS DD 250 AND THE 4286 TO FINANCIAL MANAGEMENT FOR PAYMENT (STEP 121).	PLANS (STEP 122)
RPM (STEP 110)	110. <u>RPM:</u> PARTICIPATES IN AE DESIGN REVIEW AND ACCEPTS FINAL PRODUCT.	PLANS (STEP 109)
REQUESTER (STEP 111)	111. <u>REQUESTER:</u> PARTICIPATES IN AE DESIGN REVIEW AND ACCEPTS FINAL PRODUCT.	PLANS (STEP 109)
POST COMMANDER (STEP 12)	112. <u>POST COMMANDER:</u> PARTICIPATES IN AE DESIGN REVIEW AND ACCEPTS FINAL PRODUCT.	PLANS (STEP 109)
APPROVING ENGINEER (STEP 113)	113. <u>APPROVING ENGINEER:</u> PARTICIPATES IN AE DESIGN REVIEW AND ACCEPTS FINAL PRODUCT.	PLANS (STEP 109)
CHIEF, O&M (STEP 114)	114. <u>CHIEF, O&M:</u> PARTICIPATES IN AE DESIGN REVIEW AND ACCEPTS FINAL PRODUCT.	PLANS (STEP 109)
PLANS (STEP 104)	115. <u>PLANS:</u> ACCOMPLISHES IN-HOUSE DESIGN OF MAJOR CONSTRUCTION CONTRACT. PREPARES XFE, XFF, XFD TRANSACTIONS FOR IN-HOUSE WORK AND INSPECTION PHASES. PREPARES XFJ, XJ1 AND FH1 TRANSACTIONS FOR CONTRACT PHASES.	PLANS (STEP 116)

<u>ARRIVES FROM</u>	<u>STEP NUMBER & DESCRIPTION</u>	<u>GOES TO</u>
PLANS (STEP 115)	116. <u>PLANS:</u> SOLICITS INPUTS FROM CONCERNED GROUPS ON THE COMPLETENESS OF THE DESIGN IN A PRE-CONSTRUCTION CONFERENCE. PARTICIPANTS MAY INCLUDE: CHIEF, O&M; REQUESTER; APPROVING ENGINEER; RPM; AND THE POST COMMANDER.	PLANS (STEP 122)
RPM (STEP 117)	117. <u>RPM:</u> PARTICIPATES IN REVIEW OF PLANS' IN-HOUSE DESIGN AND ACCEPTS FINAL PRODUCT.	PLANS (STEP 116)
REQUESTER (STEP 118)	118. <u>REQUESTER:</u> PARTICIPATES IN REVIEW OF PLANS' IN-HOUSE DESIGN AND ACCEPTS FINAL PRODUCT.	PLANS (STEP 116)
POST COMMANDER (STEP 119)	119. <u>POST COMMANDER:</u> PARTICIPATES IN REVIEW OF PLANS' IN-HOUSE DESIGN AND ACCEPTS FINAL PRODUCT.	PLANS (STEP 116)
APPROVING ENGINEER (STEP 120)	120. <u>APPROVING ENGINEER:</u> PARTICIPATES IN REVIEW OF PLANS' IN-HOUSE DESIGN AND ACCEPTS FINAL PRODUCT.	PLANS (STEP 116)
PLANS (STEP 109)	121. <u>FINANCIAL MANAGEMENT:</u> FORWARDS TWO COPIES OF THE 250 OR 1155 TO BALTIMORE PROCUREMENT ANNEX OR BALTIMORE DISTRICT PROCUREMENT, AS APPROPRIATE, FOR PAYMENT. CERTIFIES FJ1 TRANSACTION AND FORWARDS TO AUTOMATED SYSTEMS.	FILE
PLANS (STEPS 109, 116)	122. <u>PLANS:</u> FINALIZES ALL TRANSACTIONS AND PREPARES INVITATION FOR BID FOR THE CONSTRUCTION CONTRACT. IF ADDITIONAL FUNDS ARE NEEDED, PREPARES A DF REQUESTING FUNDS.	PLANS (STEP 123)

<u>ARRIVES FROM</u>	<u>STEP NUMBER & DESCRIPTION</u>	<u>GOES TO</u>
PLANS (STEP 122)	123. <u>PLANS:</u> DETERMINES THAT PROJECT CONSTRUCTION REQUIRES ADDITIONAL FUNDS.	PLANS (STEP 124)
	-OR-	
	THE 2544 DOCUMENT ALREADY PREPARED BY THE REQUESTER OBLIGATES SUFFICIENT FUNDS TO COVER THE COST OF CONSTRUCTION.	PLANS (STEP 128)
PLANS (STEP 123)	124. <u>PLANS:</u> DETERMINES THAT REQUESTED WORK IS A STAFF ENGINEER RESPONSIBILITY TO FUND.	APPROVING ENGINEER (STEP 126)
	-OR-	
	DETERMINES THAT REQUESTED WORK REQUIRES THE PREPARATION OF AN ADDITIONAL 2544 REIMBURSABLE ORDER BY A CUSTOMER OTHER THAN THE STAFF ENGINEER. PREPARES A DF TO THE REQUESTER.	REQUESTER (STEP 125)
PLANS (STEP 124)	125. <u>REQUESTER:</u> PREPARES FUNDING DOCUMENT (2544) AND FORWARDS TO FINANCIAL MANAGEMENT.	FINANCIAL MANAGEMENT (STEP 127)
PLANS (STEP 124)	126. <u>APPROVING ENGINEER:</u> DECIDES TO FUND CONSTRUCTION. SIGNS 2544.	FINANCIAL MANAGEMENT (STEP 127)
	-OR-	
	DECIDES TO RECYCLE THE DESIGNED PROJECT INTO THE NEXT IPB.	POST COMMANDER (STEP 91)

<u>ARRIVES FROM</u>	<u>STEP NUMBER & DESCRIPTION</u>	<u>GOES TO</u>
REQUESTER (STEP 125)	127. <u>FINANCIAL MANAGEMENT:</u> ASSIGNS A 4 DIGIT 2544 NUMBER AND REIMBURSABLE CODE TO FUNDING DOCUMENT. FORWARDS TWO COPIES OF THE ANNOTATED FUNDING DOCUMENT TO PLANS.	PLANS (STEP 128)
APPROVING ENGINEER (STEP 126)		
PLANS (STEP 123)	128. <u>PLANS:</u> ATTACHES DRAWINGS,, SPECIFICATIONS AND COST ESTIMATE TO PR&C (3953) FOR CONSTRUCTION PROJECT.	C/D, EA, CA (STEP 129)
FINANCIAL MANAGEMENT (STEP 127)		
PLANS (STEP 128)	129. <u>C/D, EA, CA:</u> SIGNS PR&C FOR CONSTRUCTION BID.	FINANCIAL MANAGEMENT (STEP 130)
C/D, EA, CA (STEP 129)	130. <u>FINANCIAL MANAGEMENT:</u> CERTIFIES FUNDS AND SIGNS PR&C.	PLANS (STEP 131)
FINANCIAL MANAGEMENT (STEP 130)	131. <u>PLANS:</u> FORWARDS PR&C AND ATTACHED DOCUMENTS TO BALTIMORE PROCUREMENT AND CONTRACTING. FORWARDS ALL PREVIOUSLY PREPARED IFS TRANSACTIONS TO AUTOMATED SYSTEMS.	FINANCIAL MANAGEMENT (STEP 132)
PLANS (STEP 131)	132. <u>FINANCIAL MANAGEMENT:</u> PREPARES FK1 WITH BID OPEN AND CLOSE DATE, AND CONTRACT AMOUNT. FORWARDS COPY OF 1155 TO THE RPM FOR CONTRACT INSPECTION. FORWARDS FK1 TO AUTOMATED SYSTEMS.	RPM (STEP 133)

<u>ARRIVES FROM</u>	<u>STEP NUMBER & DESCRIPTION</u>	<u>GOES TO</u>
FINANCIAL MANAGEMENT (STEP 132)	133. <u>RPM:</u> INSPECTS CONSTRUCTION CONTRACTOR DURING WORK PERFORMANCE. DETERMINES THAT A CONTRACT MODIFICATION IS REQUIRED. INFORMS QUALITY ASSURANCE.	QUALITY ASSURANCE (STEP 134)
	-OR-	
	DETERMINES THAT THE CONTRACTOR HAS SUCCESSFULLY COMPLETED THE CONTRACT.	RPM (STEP 143)
RPM (STEP 133)	134. <u>QUALITY ASSURANCE:</u> DETERMINES THAT REQUESTED WORK IS A STAFF ENGINEER RESPONSIBILITY TO FUND.	APPROVING ENGINEER (STEP 136)
	-OR-	
	DETERMINES THAT REQUESTED WORK REQUIRES THE PREPARATION OF AN ADDITIONAL 2544 REIMBURSABLE ORDER BY A CUSTOMER OTHER THAN THE STAFF ENGINEER. PREPARES A DF TO REQUESTER.	REQUESTER (STEP 135)
QUALITY ASSURANCE (STEP 134)	135. <u>REQUESTER:</u> PREPARES FUNDING DOCUMENT (2544) AND FORWARDS TO FINANCIAL MANAGEMENT.	FINANCIAL MANAGEMENT (STEP 137)
QUALITY ASSURANCE (STEP 134)	136. <u>APPROVING ENGINEER:</u> PREPARES FUNDING DOCUMENT (2544) AND FORWARDS SIGNED 2544 TO FINANCIAL MANAGEMENT.	FINANCIAL MANAGEMENT (STEP 137)

<u>ARRIVES FROM</u>	<u>STEP NUMBER & DESCRIPTION</u>	<u>GOES TO</u>
REQUESTER (STEP 135) APPROVING ENGINEER (STEP 136)	137. <u>FINANCIAL MANAGEMENT:</u> ASSIGNS A 4 DIGIT 2544 NUMBER AND REIMBURSABLE CODE TO FUNDING DOCUMENT. FOR- TWO COPIES OF THE ANNOTATED 2544 TO QUALITY ASSURANCE.	QUALITY ASSURANCE (STEP 138)
FINANCIAL MANAGEMENT (STEP 137)	138. <u>QUALITY ASSURANCE:</u> PREPARES CONTRACT MODIFICATION STATEMENT OF WORK AND PR&C. UPDATES IFS TRANS- ACTIONS INCLUDING PHASE COST ESTIMATES AND ADDITIONAL CONSTRUCTION AND INSPECTION PHASES. FORWARDS IFS TRANSACTION TO AUTOMATED SYSTEMS.	C/D, EA, CA (STEP 139)
QUALITY ASSURANCE (STEP 138)	139. <u>C/D, EA, CA:</u> SIGNS PR&C FOR CONTRACT MODIFICATION.	FINANCIAL MANAGEMENT (STEP 140)
C/D, EA, CA (STEP 139)	140. <u>FINANCIAL MANAGEMENT:</u> SIGNS PR&C AND ASSIGNS AN FES NUMBER TO THE 3953.	QUALITY ASSURANCE (STEP 141)
FINANCIAL MANAGEMENT (STEP 140)	141. <u>QUALITY ASSURANCE:</u> ATTACHES THE STATEMENT OF WORK FOR THE CONTRACT MODIFICATION TO THE PR&C AND FORWARDS TO BALTIMORE PROCUREMENT AND CONTRACTING.	FINANCIAL MANAGEMENT (STEP 142)
QUALITY ASSURANCE (STEP 141)	142. <u>FINANCIAL MANAGEMENT:</u> RECEIVES DD 1155 FROM BALTIMORE PROCUREMENT AND FORWARDS TO RPMM FOR COMPLETION OF CONTRACT INSPECTION.	RPM (STEP 143)

<u>ARRIVES FROM</u>	<u>STEP NUMBER & DESCRIPTION</u>	<u>GOES TO</u>
RPM (STEP 133)	143. RPM: SOLICITS INPUTS FROM CONCERNED GROUPS ON THE COMPLETENESS OF PROJECT CONSTRUCTION. PARTICIPANTS MAY INCLUDE: CHIEF, O&M; REQUESTER, APPROVING ENGINEER; POST COMMANDER; AND QUALITY ASSURANCE. ONCE PROJECT IS APPROVED AS COMPLETE, PREPARES FINAL PAYMENT AUTHORIZATION (DD 250), AN FJ1C WITH THE AMOUNT OF PAYMENT, AND AN FK1 TRANS-ACTION INDICATING THE DATE OF PROJECT COMPLETION. FORWARDS IFS TRANSACTINS AND DD 250 TO FINANCIAL MANAGEMENT (STEP 149). AFTER ONE YEAR, PROJECT FOLDER IS TURNED OVER TO REAL PROPERTY FOR UPDATE OF THE POST'S REAL PROPERTY RECORDS.	REAL PROPERTY (STEP 150)
APPROVING ENGINEER	144. APPROVING ENGINEER: PARTICIPATES IN THE REVIEW OF THE COMPLETED MAJOR CONSTRUCTION PROJECT, AND ACCEPTS PROJECT.	RPM (STEP 143)
REQUESTER (STEP 145)	145. REQUESTER: PARTICIPATES IN THE REVIEW OF THE COMPLETED MAJOR CONSTRUCTION PROJECT, AND ACCEPTS PROJECT.	RPM (STEP 143)
POST COMMANDER (STEP 146)	146. POST COMMANDER: PARTICIPATES IN REVIEW OF THE COMPLETED MAJOR CONSTRUCTION PROJECT, AND ACCEPTS PROJECT.	RPM (STEP 143)
QUALITY ASSURANCE (STEP 147)	147. QUALITY ASSURANCE: PARTICIPATES IN THE REVIEW OF THE COMPLETED MAJOR CONSTRUCTION PROJECT, AND ACCEPTS PROJECT.	RPM (STEP 143)
CHIEF, O&M (STEP 148)	148. CHIEF, O&M: PARTICIPATES IN THE REVIEW OF THE COMPLETED MAJOR CONSTRUCTION PROJECT, AND ACCEPTS PROJECT.	RPM (STEP 143)

GOES TO

STEP NUMBER & DESCRIPTION

ARRIVES FROM

FILE

149. FINANCIAL MANAGEMENT: FORWARDS TWO COPIES OF THE 250
TO BALTIMORE DISTRICT PROCUREMENT FOR PAYMENT.
CERTIFIES FJ1 TRANSACTION AND PREPARES FK1 TRANS-
ACTION WITH ALL REQUIRED ENTRIES AND FORWARDS
TO AUTOMATED SYSTEMS.

COMPLETE

150. REAL PROPERTY: UTILIZES DATA CONTAINED ON THE 4283,
4284, AND THE SPECIAL PROJECT REPORT TO UPDATE
REAL PROPERTY RECORDS AND THE IFS ASSETS DATA
BASE AS REQUIRED.

COE

151. C/D, EA, CA: SIGNS REQUESTING
THAT HQ, CORPS OF ENGINEERS APPROVE AND/OR
DESIGN A MAJOR PROJECT. FORWARDS TO CORPS.

PROGRAMS
(STEP 93)

CHIEF, B&G
(STEP B)

A. CHIEF, BUILDINGS AND GROUNDS: DETERMINES THAT TRUSS
INSPECTION IS DUE FOR A PARTICULAR FACILITY
BASED ON ESTABLISHED SCHEDULE.

-OR-

CHIEF, B&G
(STEP A)

DETERMINES NO TRUSS INSPECTION IS REQUIRED.

CHIEF, B&G
(STEP C)

B. CHIEF, BUILDINGS AND GROUNDS: CONDUCTS REQUIRED
SCHEDULED TRUSS INSPECTIONS IN ACCORDANCE WITH
APPLICABLE REGULATIONS. PREPARES REQUIRED REPORTS
AND OTHER APPLICABLE DOCUMENTATION. PREPARES IFS,
XHE, AND XHF TRANSACTIONS AND FORWARDS THEM TO
AUTOMATED SYSTEMS.

CHIEF, B&G
(STEP A)

<u>ARRIVES FROM</u>	<u>STEP NUMBER & DESCRIPTION</u>	<u>GOES TO</u>
CHIEF, B&G (STEP B)	C. <u>CHIEF, BUILDINGS AND GROUNDS:</u> DETERMINES THAT COMPLETED INSPECTION OF A FACILITY REVEALED THE TRUSSES TO BE IN A C-3 CONDITION. PREPARES WORK REQUEST (DA FORM 4283) TO DESCRIBE REPAIR REQUIREMENTS AND JUSTIFICATION.	APPROVING ENGINEER (STEP 17)
	-OR-	
	DETERMINES THAT TRUSSES ARE NOT IN A C-3 CONDITION.	CHIEF, B&G (STEP A)
COMPONENT INSPECTOR (STEP D)	D. <u>COMPONENT INSPECTOR:</u> DETERMINES THAT COMPONENT INSPECTION IS DUE FOR A PARTICULAR FACILITY BASED ON SCHEDULE PROVIDED BY THE IFS INSPECTION REQUIREMENTS REPORT.	COMPONENT INSPECTOR (STEP E)
	-OR-	
	DETERMINES NO COMPONENT INSPECTION IS REQUIRED.	COMPONENT INSPECTOR (STEP D)
COMPONENT INSPECTOR (STEP D)	E. <u>COMPONENT INSPECTOR:</u> CONDUCTS REQUIRED SCHEDULED COMPONENT INSPECTIONS IN ACCORDANCE WITH APPLICABLE REGULATIONS. PREPARES IFS XHE, XHF, AB1-AB2, AND AA1-AA9 TRANSACTIONS AND FORWARDS THEM TO AUTOMATED SYSTEMS.	COMPONENT INSPECTOR (STEP F)

<u>ARRIVES FROM</u>	<u>STEP NUMBER & DESCRIPTION</u>	<u>GOES TO</u>
COMPONENT INSPECTOR (STEP E)	F. <u>COMPONENT INSPECTOR:</u> DETERMINES THAT COMPLETED INSPECTION OF A FACILITY REVEALED CERTAIN COMPONENT(S) IN A C-3 CONDITION. PREPARES WORK REQUEST (DA FORM 4283) TO DESCRIBE REPAIR REQUIREMENTS AND JUSTIFICATION.	APPROVING ENGINEER (STEP G)
	-OR-	
	DETERMINES THAT NO COMPONENTS WITHIN A FACILITY ARE IN A C-3 CONDITION.	COMPONENT INSPECTOR (STEP D)
COMPONENT INSPECTOR (STEP F)	G. <u>APPROVING ENGINEER:</u> ENTERS APPROVAL SIGNATURE AND DATE ON WORK REQUEST (DA FORM 4283).	COMPONENT INSPECTOR (STEP H)
APPROVING ENGINEER (STEP G)	H. <u>COMPONENT INSPECTOR:</u> PREPARES COMPLETE ESTIMATE PACKAGE INCLUDING THE FOLLOWING DOCUMENTS, AS REQUIRED, BASED UPON IN-HOUSE OR SMALL SERVICE CONTRACT PERFORMANCE: DRAWINGS, SKETCHES, BILL OF MATERIALS, 4284, 4286, 3953, AND/OR ANY OTHER REQUIRED DOCUMENTATION. MAKES COPIES OF DOCUMENTS AND PLACES THEM IN WORKING FOLDER FOR RETENTION. PREPARES FH1, FJ1, XFD, XFE, AND XFF TRANSACTIONS WITH ALL REQUIRED ENTRIES AND FORWARDS THEM TO AUTOMATED SYSTEMS.	CHIEF, WORK COORDINATION (STEP 48)

<u>ARRIVES FROM</u>	<u>STEP NUMBER & DESCRIPTION</u>	<u>GOES TO</u>
START	<p>M. <u>SHOPS:</u> ACCOMPLISHES PREVENTIVE MAINTENANCE (PM) WORK IN ACCORDANCE WITH ESTABLISHED SCHEDULES. PREPARES L&E CARD ENTRIES (FM1 TRANSACTION) TO REPORT PM WORK ACCOMPLISHED AND FORWARDS L&E CARDS TO THE FINANCIAL MANAGEMENT BRANCH. AUTOMATED SYSTEMS ENTERS THE REIMBURSABLE CODE (XFN TRANSACTION) AND THE 2544 NUMBER (XFP TRANSACTION) INTO IFS FOR COMPLETED PM WORK UTILIZING THE DAILY IFS/COEMIS INTERFACE REPORT.</p>	COMPLETE
APPROVING ENGINEER (STEP 17)	<p>X. <u>WORK ORDER CLERK:</u> PREPARES IFS TRANSACTIONS ON DISAPPROVED JOR (4283 -XF, XFC; AND 4284 - XFD). RETURNS COPY OF 4283 TO REQUESTER AND FILES JOB FOLDER IN INACTIVE FILE.</p>	CANCEL

CERL DISTRIBUTION

Chief of Engineers
ATTN: DAFN-ASI-L (2)
ATTN: DAEN-CCP
ATTN: DAEN-EC
ATTN: DAEN-ECC
ATTN: DAEN-ECE
ATTN: DAEN-ZCF
ATTN: DAEN-ECB
ATTN: DAEN-RD
ATTN: DAEN-RDC
ATTN: DAEN-RDM
ATTN: DAEN-RM
ATTN: DAEN-ECZ
ATTN: DAEN-ECE
ATTN: DAEN-ECI
ATTN: DAEN-ECM

US Military Academy 10966
ATTN: Facilities Engineer

FESA, ATTN: Library 22060
ATTN: DET 111 79906

AMMRC, ATTN: DRXMR-WE 02172

USA ARRCOM 61299
ATTN: DRCIS-RI-I
ATTN: DRSAR-IS

DARCOM - Dir., Inst., & Svcs.

DLA, ATTN: DLA-WI 22314

FORSCOM
FORSCOM Engineer, ATTN: AFEN-FE

HSC
ATTN: HSLO-F 78234
Walter Reed AMC 20012

INSCOM - Ch, Instl. Div.
ATTN: Facilities Engineer (3)
ATTN: VHFS
ATTN: AHS

MDW
ATTN: DEH (10)

MTMC
ATTN: MTMC-SA 20315

USA EA,CA (50)
ATTN: Don Adams
Ft. McNair, DC 20319

NARADCOM, ATTN: DRONA-F 071160

TARCOM, Fac. Div. 42000

TRADOC
HQ, TRADOC, ATTN: AFEN-FE

TSARCOM, ATTN: STSAS-F 53120

USACC
ATTN: Facilities Engineer (2)

WESTCOM
ATTN: DEH
Fort Shafter 96858

HQ USEUCOM 09128
ATTN: ECJ 477-LOE

U.S. Army, Fort Belvoir 22060
ATTN: Engr Studies Center
ATTN: AIZA-DEH (3)

CRREL, ATTN: Library 03755

ETL, ATTN: Library 22060

WES, ATTN: Library 39180

Defense Technical Info. Center 22314
ATTN: DDA (12)

Engineering Societies Library
New York, NY 10017

National Guard Bureau 20310
Installation Division

US Government Printing Office 22304
Receiving Section Depository Copies (2)

National Bureau of Standards 20760
Director
DMAHDC
ATTN: FE
6500 Brookes Lane
WASH DC 20315

HQ DIA (3)
Office of the Chief of Staff, Army
ATTN: DACS-DIA/Anthony Gallegos

Huntsville Division (5)
ATTN: HND-SP/Mr. Leo Garden

Blackmon, Robert B.

RPMA consolidation activities in the National Capital Region. --
Champaign, Ill : Construction Engineering Research Laboratory ; avail-
able from NTIS, 1984.

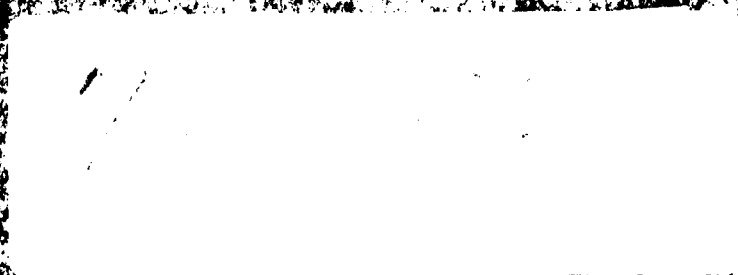
4 v. (Technical report / Construction Engineering Research Laboratory;
P-156)

Volumes 2-4 are unpublished.

1. U.S. Army -- facilities -- maintenance. 2. National Capital
Region. I. Title. II. Series: Technical report (Construction
Engineering Research Laboratory) ; P-156.

END

FILMED



DTIC